St. John the Baptist Parish
Reserve to I-10 Connector

Draft Environmental Impact Statement

St. John the Baptist Parish, LA
State Project No. H.004891
Federal Aid Project No. H004891
RPC No. PSLC-STJ

Prepared for:

The Regional Planning Commission

and

U.S. Department of Transportation - Federal Highway Administration (Lead Federal Agency)

The Louisiana Department of Transportation and Development

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Prepared by:

in association with

Urban Systems Inc.
Coastal Environments, Inc.
Bowlby and Associates, Inc.
Essential Environmental Engineering, Inc.

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U.S. 61 TO I-10
St. John the Baptist Parish, Louisiana
Reserve to I-10 Connector

Draft Environmental Impact Statement

Submitted Pursuant to 42 U.S.C. 4332 (2)(c)

by the
U.S. Department of Transportation , Federal Highway Administration
and the
Louisiana Department of Transportation and Development
and
The Regional Planning Commission

Cooperating Agency:
US Army Corps of Engineers

3-16-15
Date of Approval

Louisiana Department of Transportation and Development

3-16-15
Date of Approval

Federal Highway Administration

The following persons may be contacted for additional information concerning this document:

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New Orleans, LA, 70124-1162
(504) 483-8528

Carl M. Highsmith, Project Delivery Team Leader
Federal Highway Administration
5304 Flanders Drive, Suite A,
Baton Rouge, LA 70808;
(225) 757-7615

This project is a proposal to construct a new two lane limited access highway between (and linking) US Highway 61 (US 61) in the area of Reserve in St. John the Baptist, LA and Interstate Highway 10 (I-10). Most of the new roadway would be on bridge structure and built over wetland areas. A new interchange at I-10 would be required as part of this project. The proposed new highway would be approximately 2.6 miles in length. The logical termini, or project limits, for the EIS study area and National Environmental Policy Act (NEPA) documentation extended from ¼ mile to the east of US 51 on the east to the St. John the Baptist/St. James Parish Line on the west, and from ¼ mile north of I-10 on the north to ¼ mile south of US 61 on the south. Several alternatives were considered including the No-Build Alternative. Effects to the human and natural environment, as well as the relative benefits of the project alternatives, have been be evaluated and are presented within this DEIS document .

Comments on this draft EIS are due by
July 1, 2015 and should be sent to

Bruce J. Richards,
Project Consultant
N-Y Associates, Inc.
2750 Lake Villa Drive,
Metairie, LA, 70002.

Summary of Mitigation, Commitments and Permits

Mitigation, Commitments and Permits for the impacts associated with the implementation of the preferred alternative for the St. John the Baptist Parish Reserve to I-10 Connector project include the following:

MITIGATION MEASURES

MITIGATION OF CONSTRUCTION PERIOD IMPACTS

To minimize noise impacts, all construction equipment used in the construction phase of the project should be properly muffled and all motor panels should be shut during operation. In order to minimize the potential for impacts of construction noise on the local residents, the contractor should operate, whenever possible, between the hours of 7:00 a.m. and 5:00 p.m. At the intersection for the preferred alternative and I-10, there may be a need for some night time work (installing girders over traffic lanes, etc.) when traffic volumes are lower. This location is far from any developed or residential areas, however, so nighttime construction noise in this area should not be an impact.

To minimize potential air quality impacts, particularly related to control of particulate matter, the contractor shall comply with all relevant State, Federal and local laws and regulations. To minimize vibration impacts, pile driving operations should be monitored at critical structures, pavements and utilities during all pile driving operations.

To minimize impacts to drainage channels and excavated ponds, the following procedures should be followed:

- Channel work should be minimized and the rerouting of stream segments should be avoided. If channel work is necessary, precautions should be taken to avoid channel degrading from head-cutting. For example, grades at the culverts and bridges should remain at their existing grade.

- Minimize impacts to the riparian corridor, especially forested areas. For new crossings, prior cleared areas in the floodplain should be used when possible.

- To reduce the width of impact through the floodplain/riparian area, the entire right-of-way through the riparian area of floodplain should not be cleared. Only clear what is needed for access and construction.

- Minimize impacts to the creek banks (soil and vegetation). Stabilize and replant disturbed banks as soon as construction at that specific site is finished.

- Best Management Practices (BMPs) should be used to avoid and minimize water quality impacts and to minimize erosion of banks and bare soil and the siltation of streams. Bare soil should be stabilized and re-vegetated as soon as possible.

- Wetlands or forested floodplains should not be used for staging or storage area. A suggested area specifically for the I-10 interchange component is the triangular area created between the new westbound I-10 off-and on-ramps for that alternative, which will be bounded by at-grade roadways.

- The applicant should thoroughly brief contractors on all permit conditions. Copies of the issued permit should be posted at the project site during construction for easy reference to avoid misunderstanding and inadvertent violations.

MITIGATION OF WETLAND IMPACTS

Sections of the Preferred Alternative were located to the greatest extent possible, while still achieving project purpose and need, in already cleared and/or agricultural areas and existing roadways to avoid wetlands. The roadways through wetlands would be elevated to maintain surface water flow and to minimize the potential for a decrease in viability of or indirect loss of wetland forest due to surface water impoundment. While the use of end-on construction is assumed in this study for purposes of impact analysis as they limit impacts to the smallest possible area, other options (conventional construction, temporary bridge) could be used. If used, these options would impact additional areas other than the final project footprint, but these additional areas would be restored as much as possible to pre-existing conditions: geotextile fabric is used as a base, all haul soils are removed, and wetland trees seedlings (cypress) are planted at a rate of 50 per acre. Unavoidable direct impacts to forested wetlands would be mitigated according to the compensatory mitigation requirements of the state and federal regulatory authorities. The state will work with the regulatory agencies to develop appropriate mitigation for any unavoidable, permanent impacts to recognized jurisdictional wetlands associated with the project.

MITIGATION OF IMPACTS TO WILDLIFE

As currently proposed, the Preferred Alternative has been located to avoid impacts to bald eagle nests and colonial nesting bird colonies. To ensure mitigation of impacts to bald eagles and colonial nesting birds at the time of construction, a survey would be conducted to verify the presence or absence of Bald eagle nests and rookeries. If present, construction would proceed in conformance with USFWS and LDWF guidelines and regulatory permit conditions designed to prevent disturbance to these species during nesting season.

Impacts to aquatic species in flooded forested wetlands, marshes and ditches are expected to be minimized through the implementation of a Stormwater Pollution Prevention Plan (SWPPP),

which would include Best Management Practices for construction, and through implementation of standard emergency response procedures.

MITIGATION OF SURFACE WATER QUALITY IMPACTS

Impacts to surface water quality are expected to be minimized through the implementation of a Stormwater Pollution Prevention Plan (SWPPP), which would include Best Management Practices for construction, and through implementation of standard emergency response procedures. As an example, should a large release of a hazardous material occur on the new roadway, it would be temporarily closed at its two intersection points and a hazardous response action would be initiated.

MITIGATION OF GROUND WATER QUALITY IMPACTS

Prior to project construction, the LDEQ and possibly EPA would be contacted for consultation in order to identify measures and safeguards that would be required to minimize the potential of impacts to ground water resources.

COMMITMENTS

No commitments are present at this time.

PERMITS

- Because the project affects wetlands, a Section 404 Permit will be required from the U.S. Army Corps of Engineers, New Orleans District.

- As the Louisiana Department of Natural Resources Coastal Management Division (CMD) has indicated that the proposed project is located inside the Louisiana Coastal Zone, a Coastal Use Permit (CUP) is required from the CMD.

- A Section 401 Permit (Water Quality Certification) will be required from the Office of Environmental Services, Louisiana Department of Environmental Quality.

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List of Acronyms

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
ANSI	American National Standards Institute
APE	Area of Potential Effect
BA	Bowlby & Associates, Inc.
BMP	Best Management Practices
BNSF	Burlington Northern - Santa Fe Railway
CAL3QHC	California Intersection/ Line Source Dispersion Model version 2.0
CE	Categorical Exclusion
CEI	Coastal Environments, Incorporated
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System.
CFR	Code of Federal Regulations
CNIC	Canadian National Illinois Central Railroad
CO	Carbon Monoxide
COB	Conveyance Office Book
CUP	Coastal Use Permit
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted decibel
DC	Direct Current
LDEQ	Louisiana Department of Environmental Quality
Draft EIS/ DEIS	Draft Environmental Impact Statement
DOTD	(Louisiana) Department of Transportation and Development
EA	Environmental Assessment
EDRG	Economic Development Research Group, Inc.
EEE / E3	Essential Environmental Engineering, Inc.
EIS	Environmental Impact Statement
EO	Executive Order
EPA/ USEPA	United States Environmental Protection Agency

FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FFGA	Full Funding Grant Agreement
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
Final EIS/ FEIS	Final Environmental Impact Statement
GDP	Gross Domestic Product
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
KCS	Kansas City Southern Railroad
LANOIA	Louis Armstrong New Orleans International Airport
LDEQ	Louisiana Department of Environmental Quality
Ldn	Day-Night Equivalent Sound
Leq	Leq is the constant, average sound that over a period of time contains the same amount of sound energy as fluctuating noise
Leq(h)	One-hour Equivalent Sound Level
Lmax	Maximum Sound Level
LOS	Level of Service
LPDES	Louisiana Pollutant Discharge Elimination System
LRTP	Long Range Transportation Plan
LUST	Leaking Underground Storage Tank
LWCF	Land and Water Conservation Fund
mbpd	Millions of barrels per day
MOBILE5b	Mobile Source Emissions Model version 5b
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act (1969)
NHP	National Historic Park
NOA	Notice of Availability of Environmental Impact Statement
NOAA	National Oceanic Atmospheric Administration
NOI	Notice of Intent to Prepare an Environmental Impact Statement

NOPB	New Orleans Public Belt Railroad
NO_x	Nitrogen Oxides
NPDES	National Pollution Discharge Elimination System
NPL	National Priority List, also known as the "Superfund" list of uncontrolled or abandoned hazardous waste sites that have become contaminated.
NPS	National Park Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
N-Y	N - Y Associates, Inc.
OEA	Office of Environmental Assessment
OSHA	Occupational Safety and Health Administration
O_3	Ozone
Pb	Lead
PE	Preliminary Engineering
PM_{10}	Particulate matter 10 microns or less in nominal diameter
ppm	Parts per million
PPV	Peak Particle Velocity
PWI	Protected Waters Inventory
RMS	Root Mean Square
ROD	Record of Decision
ROW	Right-of-way
RPC	Regional Planning Commission for Jefferson, Orleans, Plaquemines, St. Bernard and St. Tammany Parishes

RTE	Rare, threatened and endangered
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users
SCS	Soil Conservation Service
SHPO	State Historic Preservation Officer
SLM	Sound Level Meter
SO_2	Sulfur Dioxide
SO_x	Sulfur Oxides
STIP	State Transportation Improvement Program
TAZ	Traffic Analysis Zone
TIP	Transportation Improvement Program
TSM	Transportation Systems Management
UPRR	Union Pacific Railroad
U.S. HUD	U.S. Department of Housing and Urban Development
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
v/c	Volume/ Capacity
VdB	velocity decibel
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles of Travel
YOE	Year of Expenditure

List of Preparers

Name	Education		Responsibility	Years Experience
	Degree	Major		
N-Y Associates, Inc. (N-Y)				
Bruce Richards	B.A. M.C.P.	Political Science City Planning	Senior Project Manager; Editing, Technical Writing; Public Involvement, Quality Control Review	27
Jim Simmons, P.E.	B.S.	Civil Engineering	Deputy Project Manager; Conceptual Engineering, Public Involvement, Quality Control Review	37
Chris Mills	BS, MURP	Urban & Regional Planning	GIS Mapping, Public Involvement	15
Annabeth McCall	BS, MURP	Urban & Regional Planning	GIS Mapping	1
Leon Cuccia			Plan and Profile Sheets	31
Urban Systems Associates (US)				
Alison Catarella-Michel, P.E., PTOE	B.S.	Civil Engineering	Traffic Impacts	15
Nicole Stewart, PE, PTOE	B.S.	Civil Engineering; Physics	Traffic Impacts	9
Brandon Perrilloux, EI,	B.S.	Civil Engineering	Traffic Impacts	4
Anna Lai, PE, PTOE	B.S. M.S.	Civil Engineering, Transportation Engineering	Traffic Impacts	3
Essential Environmental Engineering (E3)				
Kim Henry, P.E.	B.S. MS	Chemical Engineering Urban Studies	GIS Mapping, Utility Research, Public Involvement	28
Coastal Environments, Inc.				
Karen Wicker	B.S. M.S. PhD.	American Studies Physical Geography Physical Geography	Biology, Wetlands, Endangered Species	39
Ed Fike	B.S	Agriculture (Watershed Management)	Hazardous and Solid Waste Analysis	33
Leslie Couvillion	B.A. M.N.S.	Anthropology Geography - Mapping Sciences	GIS mapping	7
David Kelley	B.A. PhD.	Anthropology Anthropology	Cultural Resources	35
Sara Hahn	B.A. M.A.	Anthropology Anthropology	Cultural Resources	17
Thurston Hahn	B.A.	Anthropology	Cultural Resources	23

Name	Education		Responsibility	Years Experience
	Degree	Major		
Bowlby and Associates				
Wm. Bowlby	B.S. M.S. PhD	Civil Engineering Civil Engineering Civil Engineering	Noise and Air Analysis	40
Clay Patton	B.E..	Civil Engineering	Noise and Air Analysis	21
EDRG				
Glen Weisbrod	B.A. M.S. M.C.P.	Economics Engineering City Planning	Economic Impacts	32
Naomi Stein	B.S. M.S. M.C.P.	Civil Engineering Transportation City Planning	Economic Impacts	10
Regional Planning Commission (RPC)				
Jeff Roesel, AICP	B.A., M.U.R.P.	Urban and Regional Planning	Lead Agency Project Manager	25
Department of Transportation and Development (DOTD)				
Mike LaFleur, P.E.	B.S.	Mechanical Engineering	Environmental Review	32
Federal Highway Administration				
Robert Mahoney, P.E.	M.S.	Civil Engineering	Environmental Specialist	50
Scott Nelson, P.E.	B.S. M.S.	Civil Engineering Transportation Engineering	Area Engineer	17

List of Agencies, Organizations, and Persons to Whom Copies of the Statement were Sent

Reserve to I-10 Connector EIS (St. John the Baptist Parish):

Lead Agencies:	Section/Division:	Primary Contact:	Number of Copies:
Federal Highway Administration	Louisiana Division	Robert Mahoney	3
Louisiana Department of Transportation and Development	Environmental	Mike Lafleur	15
Louisiana Department of Transportation and Development	District 62	Jesse McClendon	5
Regional Planning Commission (MPO)	N/A	Jeff Roesel	3
Cooperating Agencies			
US Army Corps of Engineers-Regulatory Division	New Orleans District	Rob Heffner	1
Participating Agencies			
US Environmental Protection Agency - Regional Office in Dallas, TX	Office of Planning and Coordination	John MacFarlane, Rhonda Smith	5
Department of Transportation	Federal Aviation Administration	Teresa Bruner (Dallas Regional Administrator)	1
United States Fish and Wildlife Service		Joshua C. Marceaux	1
Louisiana Department of Natural Resources	Coastal Management Division	Ontario James	1
Louisiana Department of Wildlife and Fisheries	Ecological Investigations	Chris Davis	1
Louisiana Department of Environmental Quality	Southeast Regional Office – Bayou Lafourche Office	Patrick Breaux	1
St. John the Baptist Parish	Administration	Natalie Robottom - Parish President	1
St. John the Baptist Parish	Administration	Paige Falgoust - Communications Director	1
St. John the Baptist Parish	Administration	Jobe Boucvalt - Director of Public Safety	1
St. John the Baptist Parish	Administration	Angelic Sutherland - Director of Planning and Zoning	1
St. John the Baptist Parish	Office of Emergency Preparedness	Kathryn Gilmore - Deputy Director	1
Pontchartrain Levee District		Monica Salins - Executive Director	1
Port of South Louisiana		Paul Aucoin	2
South Central Planning and Development Commission		Leonard P. Marretta - MPO Administrator	1
Other Agencies			
Department of the Interior	Headquarters, Washington DC		12
Environmental Protection Agency	Headquarters, Washington DC		1 (electronically filed)
Louisiana State Historic Preservation Office			1
Elected Officials (Federal)			
United States Senate		Bill Cassidy	1
United States Senate		David Vitter	1
US House of Representatives	6th District	Garrett Graves	1
US House of Representatives	2nd District	Cedric Richmond	1

List of Agencies, Organizations, and Persons to Whom Copies of the Statement were Sent

Reserve to I-10 Connector EIS (St. John the Baptist Parish)

(continued):

Elected Officials (State)			
Louisiana House of Representatives	District 57	Randal L. Gaines	1
Louisiana House of Representatives	District 81	Clay Schexnayder	1
Louisiana House of Representatives	District 56	Greg Miller	1
Louisiana State Senate	District 2	Senator Troy Brown	1
Louisiana State Senate	District 19	Senator Gary Smith	1
Elected Officials (Local)			
St. John the Baptist Parish Council	Division A	Lucien J. Gauff, III	1
St. John the Baptist Parish Council	Division B	Jaclyn Hotard	1
St. John the Baptist Parish Council	District 1	Art Smith	1
St. John the Baptist Parish Council	District 2	Ranney Wilson	1
St. John the Baptist Parish Council	District 3	Lennix Madere, Jr.	1
St. John the Baptist Parish Council	District 4	Marvin Perriloux	1
St. John the Baptist Parish Council	District 5	Michael Wright	1
St. John the Baptist Parish Council	District 6	Larry Snyder	1
St. John the Baptist Parish Council	District 7	Cheryl Millet	1
Libraries			
State Library			20 + digital (pdf) copy
St. John the Baptist Parish Library	Main Branch		2
St. John the Baptist Parish Library	Reserve Branch		2

ENVIRONMENTAL DETERMINATION CHECKLIST

Project No. H.004891[Federal Aid Project No. H004891]
Name: Reserve to I-10 Connector
Route: New (US 61 to I-10)
Parish: St. John the Baptist

1. General Information

Status: () Survey ( ) Preliminary Plans
( ) Plan-in-Hand ( ) Final Design

2. Class of Action

(X) Environmental Impact Statement (E.I.S.)
( ) Environmental Assessment (E.A.)
( ) Categorical Exclusion (C.E.)
( ) Programmatic C.E. (as defined in letter of agreement dated 03/15/95, does not require FHWA approval)

3. Project Description (use attachment if necessary)

The proposed project includes the construction of a new route between US 61 in Reserve, LA north to I-10) in St. John the Baptist Parish. Proposed construction items intersection improvements at the intersection of US 61 and Regala Park Drive/ W. 10th Street (LA 637) both improvement of a portion of Regala Park Drive, construction of new at-grade two lane roadway, construction of an elevated two lane highway across undeveloped wetland areas, and construction of a new interchange with I-10 between the existing I-10 interchanges with LA 641 and LA 3188.

4. Public Involvement

(X) Views were solicited during Scoping Process between July 2009 and January 2010. Responses are attached.
( ) No adverse comments were received.
( ) Adverse comments are addressed in attachment.
( ) A public hearing (P/H)/Opportunity is not required.
( ) An opportunity for requesting a P/H will be afforded upon your concurrence.
( ) Opportunity was afforded, with no requests for P/H.
(X) A Public Hearing will be held after distribution of the DEIS _____.
(X) Public Meetings were held in August 2009; November 2009; April 2010; and April 2013.

5. Real Estate (If yes, use attachment)

	NO	YES
a. Will additional right-of-way be required?	( )	(**X**)
b. Will any relocations be required? (Attach conceptual stage relocation plan if yes)	(**X**)	( )
c. Are construction or drainage servitudes required?	(**X**)	()

6. Cultural and 106 Impacts (If yes, use attachment)

		NO	YES
a.	Section 4(f) or 6(f) lands	(**X**)	( )
b.	Historic sites/structures (106) (existing or pre-existing)	(**X**)	()
c.	Archaeological sites	(**X**)	()
d.	Cemeteries	(**X**)	( )
e.	Historic Bridges	(**X**)	( )

7. Wetlands (Attach wetlands finding, if applicable)

		NO	YES
a.	Are wetlands being affected?	( )	(**X**)
b.	Can C.O.E. Nationwide Permit be used?		(**X**)

( )

8. Natural Environment (use attachment if necessary)

		NO	YES
a.	Endangered/Threatened Species/Habitat	(**X**)	( )
b.	Within 100 Year Floodplain?	( )	(**X**)
	Is project an encroachment in Floodplain?	( )	(**X**)
	Is encroachment "significant" as defined by 23 CFR 650?	(X)	( )
c.	In Coastal Zone Management Area?	( )	(**X**)
	Is project in compliance?	( )	(**X**)
d.	Coastal Barrier Island (Grand Isle only)	(**X**)	( )
e.	Farmlands (use form AD 1006 if necessary)	( )	(**X**)
f.	Is project on Sole Source Aquifer?	(**X**)	( )
	Is there any impact on aquifer?	(**X**)	( )
	Is coordination with EPA necessary?	(**X**)	( )
g.	Natural & Scenic Stream (_____)	(**X**)	( )
	Applied for a Class B Permit?		(**X**)

( )

9. Physical Impacts (use attachment if necessary)

		NO	YES
a.	Is a noise analysis warranted (Type I project)	( )	(**X**)
	Are there noise impacts based on violation of the (NAC)?	( )	(**X**)
	Are there noise impacts based on the 10 dBA increase?	(**X**)	( )
	Are noise abatement measures reasonable and feasible?	(**X**)	( )
b.	Is an air quality study warranted?	( )	(**X**)
	Do project level air quality levels exceed the NAAQS for CO?	(**X**)	( )
c.	Is project in a non-attainment area for Carbon monoxide (CO), Ozone (O_3), Nitrogen dioxide (NO_2), or Particulates (PM-10)?	( )	(**X**)
d.	Is project in an approved Transportation Plan, Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP)?	( )	(**X**)
e.	Are construction air, noise, & water impacts major?	(**X**)	( )
f.	Are there any known waste sites or U.S.T.s?	(**X**)	( )
	Will these sites be tested prior to purchase of right-of-way?	(**X**)	( )

10. Social Impacts (use attachment if necessary)

		NO	YES
a.	Land use changes	(**X**)	( )
b.	Churches and Schools	(**X**)	( )
c.	Title VI Considerations	(**X**)	( )
d.	Will any specific groups be adversely affected (i.e., minorities, low-income, elderly, disabled, etc.)?	(**X**)	( )
e.	Hospitals, medical facilities, fire police	(**X**)	( )
f.	Transportation pattern changes	( )	(**X**)
g.	Community cohesion	(**X**)	( )
h.	Are short-term social/economic impacts due to construction considered major?	(**X**)	( )
I.	Do conditions warrant special construction times (i.e., school in session, congestion)?		( )
(**X**)			
j.	Will the roadway be closed?	( )	(**X**)
k.	Will a detour bridge be provided?	(**X**)	( )
l.	Will a detour route be signed?	( )	(**X**)

11. Other

Preparer: Bruce J. Richards
Date: March, 2015

Attachments (Disposition)

( ) Scoping Process and Responses (RPC)
( ) Wetlands Finding (RPC)
( ) Noise Analysis (RPC)
( ) Air and Noise Analysis (RPC)
( ) 106 Documentation (To Be completed as part of FEIS)

EXECUTIVE SUMMARY

INTRODUCTION

The Reserve to I-10 Connector is a proposed project in St. John the Baptist, Louisiana. The lead agencies for the project are the Regional Planning Commission (RPC), the Louisiana Department of Transportation and Development (DOTD), and the Federal Highway Administration (FHWA) is the lead federal agency. The sole cooperating agency for the study is the United States Army Corps of Engineers (USACE), New Orleans District, and there are multiple participating agencies for the project.

PROJECT LOCATION

The proposed project is located in the greater New Orleans metropolitan region in southeast Louisiana, in St. John the Baptist Parish. The project location is entirely within the east bank of the Mississippi River. The logical termini, or project limits, for the EIS study area and National Environmental Policy Act (NEPA) documentation extended from ¼ mile to the east of US 51 on the east to the St. John the Baptist/St. James Parish Line on the west, and from ¼ mile north of I-10 on the north to ¼ mile south of US 61 on the south

PROJECT BACKGROUND

The Port of South Louisiana has experienced significant growth over the last few years, and looks to continue this growth into the future. Concurrently, the east bank of St. John the Baptist has also experienced growth and hopes to have continued economic growth in the future. Continued growth of the Port and the commercial/industrial component of the Parish are vital to the economic recovery of the region. However, one of the impediments to further development has been access to the interstate for Port and other commercial traffic. While port facilities exist along a 54-mile stretch of the Mississippi River, the main focus of port activities and need for port access has been focused in the Reserve area. Unfortunately, Reserve has no direct connection to the interstate system. Interchanges with I-10, the nearest interstate highway lie either eight miles to the east at LA 3188 or twelve miles to the west at LA 641. Access to I-10 from the port facilities at Reserve via either of these routes is circuitous, using one of three state highways to access US 61, then traveling either west or east along this congested commercial thoroughfare to the state highways linking to I-10. The routes also pass through residential areas.

PROJECT PURPOSE AND NEED

PURPOSE OF THE PROJECT

The purpose of this project is to provide improved access between the US 61 (Airline Highway) corridor in the Reserve area north to I-10, for (1) general commercial and non-commercial traffic in the Parish, and for (2) the Port of South Louisiana.

NEED FOR THE PROJECT

General Commercial and Non-Commercial Access

Interstate 10 is a major east-west roadway for traffic crossing St. John the Baptist Parish. One of only two interstate facilities within the parish, (the other being I-55, which intersects with I-10), I-10 not only services vehicular traffic passing through St. John the Baptist Parish, but also serves to some degree traffic which originates and terminates from within the Parish. The interstate offers Parish residents and businesses a limited-access route to the rest of the continental U.S. via the interstate system.

Parish officials and parish residents have expressed their desire for quicker and more direct routes to I-10 from the US 61 corridor. The intent is to provide reliable access for residents and area citizens. This includes trips from the Parish to surrounding areas for employment-related commuting, shopping, and educational and medical services, and from surrounding areas to the Parish for similar trips, particularly employment-related trips to industrial areas along the river corridor. Additionally, better access routes are desired in order to reduce vehicle hours traveled (VHT) and to provide travel time savings and benefits which will accrue to those living, working, and/or traveling to and from the developed areas of the Parish. As it stands currently, with approximately fifteen miles of roadway within St. John the Baptist Parish, I-10 has two exits or access points: the Belle Terre exit (Hwy 3188) and the US 51 exit. Compounding the access issue is that west of Belle Terre the next access point is eleven (11) miles away in St. James Parish (the interchange with LA Hwy 641).

The improved access is also needed to enable emergency vehicles to reach destinations more promptly. This entails not only response to major disasters or incidents, but also day to day response operations by police, fire, and EMT vehicles. There have been concerns from parish officials that emergency vehicles are often dispatched to highway incidents along I-10, but once they are on I-10, they have no quick way to respond to other emergencies occurring in the developed areas of the Parish. This is due to the isolated nature of I-10 between the Belle Terre and Gramercy exits, as well as a long divided, elevated stretch between those two exits.

Port Access

The Port of South Louisiana and local officials have expressed a need for better access for Port truck traffic to facilitate the recent trend of economic growth of the Port and the region as a whole. In the wake of Hurricane Katrina and its impact on the New Orleans metro area, continued growth of the Port and the associated commercial/industrial component of the Parish are seen as vital to the economic recovery of the region. However, one of the impediments to further development has been access to the interstate for Port. While port facilities exist along a 54-mile stretch of the Mississippi River, the main focus of port activities and need for port access has been focused in the Reserve area. Unfortunately, Reserve has no direct connection to the interstate system. Interchanges with I-10, the nearest interstate highway, lie either eight miles to the east at Highway 3188 or twelve miles to the west at Highway 641. Access to I-10 from the port facilities at Reserve via either of these routes is rather cumbersome, using one of three state highways to access US 61, then traveling either west or east along this congested commercial thoroughfare to the state highways linking to I-10. A more direct access route to I-10 will facilitate Port-related traffic.

Secondarily, Parish officials and citizens have expressed the strong desire to lessen the impact of Port truck traffic on local roads. In particular, they would like to lessen the amount of truck traffic currently passing through residential areas, such as the Belle Terre area. They would also like to lessen the impact of truck traffic as it affects current congestion levels on US 61. A more direct access route to I-10 will help to accomplish both of these goals.

DEVELOPMENT, EVALUATION AND SCREENING OF ALTERNATIVES

The development of project alternatives under this specific Environmental Impact Statement (EIS) process was accomplished with a combination of public involvement and input and technical expertise on behalf of the project team. The process began with the Early Involvement/Scoping process, which led to an establishment of fifteen (15) **Preliminary Alternatives**, including a TSM Alternative and a No Build Alternative. At the conclusion of the Early Involvement/Scoping process there were eleven alternative left: nine (9) Build Alternatives, the TSM Alternative and the No Build Alternative. These were termed the **Initial Alternatives**.

The initial build alternatives were to first be evaluated based on criteria agreed to by the lead agencies. Possible criteria listed under the original scope included order of magnitude cost estimates, environmental constraints (wetlands, hazardous waste sites, endangered species, etc.) and anticipated human environment impacts (relocations, visual impacts, noise impacts, etc.). This evaluation was intended to be done with readily available or easily developed data, and following the evaluation of the initial build alternatives, they were to be screened such that a maximum of two (2) build alternatives would be carried forward in the process. These one or two build alternatives along with the No-Build Alternative and the Transportation Systems Management (TSM) Alternative would then be more fully developed as *candidate alternatives* and analyzed in

terms of likely impacts.

During the evaluation process, the US Army Corps of Engineers stated that for its concurrence with the process as the sole Cooperating Agency on the project, a different focus was needed. Rather than a broad-based initial evaluation process concluded with a consensus among the Lead, Cooperating and Participating Agencies, the initial screening would have to more closely follow the Corps procedure of determining the "least damaging practicable alternative" (LDPA), with a distinct screening process focused on "least damaging" – **as the project relates to wetlands** - and "practicability". According to the Corps, practicable alternatives are those alternatives that are "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."

"PRACTICABILITY" EVALUATION AND SCREENING

The Conceptual Engineering of the Alternatives showed that the alternatives were all practicable in terms of cost and existing technology; the only remaining variable in terms of practicability is then *logistics in light of overall project purposes*. As a result, the first set of screening criteria evaluated whether or not an alternative is practicable *by whether or not it adequately meets the project's purpose and need*.

For purposes of this first level of screening, two analyses and evaluation were completed:

- The first measure of travel time savings is for regular vehicular traffic, which includes discussion as to directional split, traffic volumes, and *gross* travel times savings.
- The second measure of travel time savings refers to savings for emergency vehicles responding to calls along I-10 between the Belle Terre and Lutcher exits, which includes *average* travel time savings for emergency vehicles.

As a result of their relative lack of time travel savings compared to the other build alternatives, **AP-2** and **AP-7** (along with **P-4** which has no travel time savings) were suggested for elimination from further consideration as not being practicable alternatives. As a result of this evaluation and screening for emergency response times, **Alternatives P-4, EIS-4** and **EIS-5** were suggested for elimination from further consideration. This eliminated five Alternatives from further consideration.

"LEAST DAMAGING" EVALUATION AND SCREENING

The second set of criteria was designed to best evaluate which of the remaining build alternatives were the least damaging to the environment. They were further divided into two separate sub categories that are addressed in a specific order: (1) impacts specifically related to wetlands, and (2) other (human environment) impacts.

Based on the evaluation of the four remaining build alternatives, **Alternatives AP-6B and P-1** were determined to be the least damaging in terms of potential impacts relating to wetlands. Those alternatives were also the least damaging in terms of other (human environment) impacts. Thus, these two alternatives (along with the No-Build Alternative and the TSM Alternative) were selected to move forward in the EIS process and were fully developed as *candidate alternatives* and analyzed in terms of likely impacts. These candidate alterntives are described in depth below:

1. NO BUILD ALTERNATIVE - The No-Build Alternative provides a baseline to compare the other alternatives and includes improvements within the immediate project area that were already planned or programmed. For purposes of traffic and air quality analysis, all other planned and programmed transportation improvements within the *region* are also included in the No-Build Alternative, as these will have some effect on traffic demand and traffic volumes within the corridor.

2. TRANSPORTATION SYSTEM MANAGEMENT (TSM) ALTERNATIVE - The TSM Alternative was designed to be a low-cost option for implementation that would address the EIS purpose and need. The purpose of the project in general -- to aid traffic in the Reserve area in accessing I-10 -- as well as the consideration of a project being "low-cost," leads to the TSM components focusing on improving traffic along US 61 or other routes which lead directly to I-10. As noted above, in the No Build Alternative there are several such projects recently completed, underway, or planned which would improve traffic. However, there remains four instances where the installation of acceleration lanes (primarily for heavy trucks leaving Port or other industrial facilities) would aid in traffic flow by allowing slower-accelerating trucks to get up to sufficient travel speed before entering US 61. These include the following locations:

1. **West 10th Street (signalized)** - northbound to eastbound right-turn acceleration lane
2. **Terre Haute Avenue (signalized)** - northbound to eastbound right-turn acceleration lane, and northbound to westbound left-turn acceleration lane
3. **Marathon Avenue (signalized)** - northbound to eastbound right-turn acceleration lane
4. **Marathon West Entry (unsignalized)** - northbound to eastbound right-turn acceleration lane

3. BUILD ALTERNATIVE AP-6B - This alternative extends north from US 61 to I-10. At US 61, its alignment would connect to Regala Park Drive, which is a northern extension of LA 637 (W. 10th Street). LA 637 extends south to the Port of South Louisiana and is planned for future roadway upgrades.

Beginning at the US 61 intersection with Regala Park Drive, the roadway would first include some improvements at the intersection, including installation of directional turning lanes. Regala Park Drive would be improved to meet LADOTD RC-3 Roadway Design Criteria, with the addition of 10 ft. shoulders, striping, clear zone and drainage.

Where Regala Park Drive currently turns to the west, the new roadway would continue north and the east-west running portion of Regala Park Drive would intersect as a "T" intersection.

The new two-lane roadway would proceed north for approximately 1500 feet through agricultural fields. At that point, the two-lane roadway would enter the wetlands area and transition to an elevated highway on structure. The elevated highway would consist of two travel lanes of 12 feet each, divided by a concrete barrier rail in the center. Each travel lane would have a 10 foot outside shoulder and a two foot inside shoulder. The entire structure would be 52.5 feet wide, and the right-of way corridor would be approximately 100 feet wide (82.5 feet minimum).

As it proceeds toward I-10, the elevated highway structure heads slightly west of due north, so that the highway can connect to the at-grade portion of I-10 rather than the elevated portion of I-10. Approximately 1.22 miles north of the beginning of the elevated highway (or .8 miles south of I-10) the structure will pass over a gas pipeline.

At I-10, the roadway will intersect with the interstate via a fully directional interchange, very similar in form and function to the I-10 interchange at Belle Terre Boulevard, the nearest interchange to the east. Traffic from the new roadway heading west on I-10 and westbound traffic from I-10 heading south on the new roadway will utilize a new overpass over I-10, with the traffic from the new roadway heading west on I-10 utilizing a ¼ cloverleaf. Traffic from eastbound I-10 accessing the new roadway, and new roadway traffic heading east on I-10 will each use at-grade off-ramps and on-ramps on the south side of I-10.

4. BUILD ALTERNATIVE P-1 - This alternative extends north from US 61 to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. The alternative begins as an extension of LA 3179 (E. 22nd Street) at US 61. At the intersection of those two roadways, the alternative would first include some improvements at the intersection, including re-orientation and re-striping of the center lane on LA 3179 south of US 61 (from turn lane to a through lane) as well as installation of a traffic signal and directional turning lanes on US 61.

North of US 61, the new roadway would be an at-grade roadway for a short distance (less than ¼ of a mile), and then would transition to an elevated highway on structure over wetlands. The elevated highway dimensions and specifications would be the same as those for AP-6B. And similar to AP-6B, it is assumed that in order to minimize impacts, end-on bridges construction would be utilized in wetland areas.

The elevated roadway proceeds north-northwest for approximately ¾ mile north of US 61 before curving to the northeast. Originally, the route was to pass over the extreme northern edge of non-wetland agricultural areas as it proceeded northeast, but during field research it was determined that the original route was located on a combination of a back levee and a drainage canal. As such, the alignment was refined in June 2013 so that it curved to the east earlier, and passed through the agricultural fields several hundred yards south of the canal and levee. Before returning to the wetland areas, the alternative shifts

back to its original alignment near the northern edge of the fields. It should be noted that while this section of the roadway is not passing through undeveloped wetland areas, it remains on an elevated structure.

Just prior to its intersection with Belle Terre Boulevard, the elevated roadway turns more to the east and transitions back to an at-grade roadway to intersect with Belle Terre. The location of the Belle Terre intersection is the existing stub-out for the planned Woodland Drive extension, about ½ mile from the I-10 interchange.

The new intersection with Belle Terre would require some modification to the existing stub-out under two possible options. One option would be to convert the intersection to a signalized intersection, with corresponding turn lanes for each approach. The second option is installation of a free-flow roundabout intersection.

IMPACT ANALYSIS

The final phase of alternative evaluation began with an assessment of the environmental impacts of the four candidate alternatives considered (the No Build Alternative, the TSM Alternative and the two Build Alternatives) relative to the evaluation categories of transportation and traffic, human environment, and the natural environment.

In summary each Alternative was found to likely have some direct impacts within the project study area. Some of these impact categories were considered non-adverse/beneficial, and require no mitigation measures. They are listed below for each alternative:

NO BUILD ALTERNATIVE
- Traffic Impacts

TSM ALTERNATIVE
- Traffic Impacts

ALTERNATIVE AP-6B
- Traffic Impacts
- Economic Impacts
- Access to Community Facilities and Services

ALTERNATIVE P-1
- Traffic Impacts
- Economic Impacts
- Access to Community Facilities and Services

Other impact area categories were considered unavoidable, adverse social, economic, or natural environmental impacts that require some form of mitigation. They are also listed below for each alternative:

NO BUILD ALTERNATIVE
- Construction Period Impacts

TSM ALTERNATIVE
- Construction Period Impacts

ALTERNATIVE AP-6B
- Construction Period Impacts
- Wetland Impacts (36.63 acres)
- Impacts to Wildlife
- Surface Water Quality Impacts
- Ground Water Quality Impacts

ALTERNATIVE P-1
- Construction Period Impacts
- Wetland Impacts (35.40 acres)
- Impacts to Wildlife
- Surface Water Quality Impacts
- Ground Water Quality Impacts

EVALUATION OF CANDIDATE ALTERNATIVES AND IDENTIFICATION OF PREFERRED ALTERNATIVE

An evaluation was then conducted for each of the candidate alternatives under consideration for the proposed Reserve to I-10 Connector Project. The purpose of the evaluation process was to bring together the salient facts for each alternative so that their benefits, costs, and environmental consequences can be evaluated against the stated goals for the proposed project as set forth in the project's Purpose and Need.

EVALUATION MEASURES

The project's *Purpose and Need* section provides a detailed identification of the transportation system's existing problems and needs as well as the purpose for the project, which is as follows:

Provide improved access between the US 61 (Airline Highway) corridor in the Reserve area north to I-10, for

> *(1) general commercial and non-commercial traffic in the Parish; and for*
> *(2) the Port of South Louisiana.*

The two aspects of the project purpose were used to compare the No-Build Alternative, TSM Alternative and the two proposed Build Alternatives.

Also compared were the impacts of the build alternatives on the environment, described in detail in the preceding chapter.

Addressing Project Purpose

No Build Alternative – The No Build Alternative does not address the project's purpose. In no manner does it provide for improved access between the US 61 (Airline Highway) corridor in Reserve north to I-10, neither for general commercial and non-commercial traffic nor for traffic related to the Port of South Louisiana.

TSM Alternative – The TSM addresses the project's purpose, albeit to a small degree. As noted in *Chapter IV*, TSM improvements are expected to overall reduce delays at the improvement intersections. This in vehicular access to existing routes leading from Reserve to I-10, but only for those vehicle trips which pass through those intersections. Trips that do not pass through those intersections to access I-10 will not be affected positively.

Build Alternatives – The Build Alternatives both address the project's purpose and need, much moreso than the TSM Alternative. As noted in *Chapter IV,* US 61 is expected to have more capacity with both Alternative P-1 and AP-6B than with the No Build or TSM conditions, and while US 61 is expected to operate poorly in the 2038 design year in all scenarios, Alternatives P-1 and AP-6B are expected to result in *decreases* in delay on US 61 from the No Build condition. Alternatives P-1 and AP-6B would also provide more of a safety benefit compared to the TSM improvements and No Build condition due to controlled access on the elevated sections of the alternatives. All of these changes will result in improved access within the US 61 corridor portion of the project.

However, there is a difference in degree to which the two projects address the project purpose and need:

- While both Alternatives P-1 and AP-6B would allow emergency responders to by-pass sections of US 61 which could decrease emergency response time, Alternative AP-6B would provide a more direct access route for emergency response to I-10.

- Both Alternatives P-1 and AP-6B are expected to provide more efficient port (truck) access to I-10 compared to the No Build Alternative or TSM Alternative. Alternative AP-6B is expected to provide the more efficient route for truck traffic than Alternative P-1 due to a direct connection to I-10, and due to its direct connection to newly improved W. 10th Street, the designated port access route.

Comparing Project Impacts

All four alternatives have some degree of environmental impacts, some beneficial, and some negative (requiring mitigation).

While the No Build Alternative would require no mitigation, and while the TSM Alternative requires little in mitigation, conversely, the No Build Alternative provides no beneficial impacts, and the TSM Alternative provides little in terms of impacts.

The larger comparison of project impacts is between the two Build Alternatives which address the project's purpose and need:

- As discussed above, each results in positive traffic impacts relating to enhanced access between I-10 and US 61 in Reserve.
- Each will also have an decided beneficial economic impact: as described in Chapter IV, the total economic impact of Alternative P-1 is estimated at $99 million dollars in 2038, while Alternative AP-6B would have a slightly higher impact of $103 million.
- Both build alternatives are expected to have positive indirect and cumulative impacts.
- Each build alternative would have an impact on wetland acreages, which are estimated to be very similar in size: 36.63 acres directly impacted under Alternative AP-6B and 35.40 acres under Alternative P-1.
- Both build alternatives would have similar impacts on wildlife, surface water quality and ground water quality.

IDENTIFICATION OF PREFERRED ALTERNATIVE

The findings were presented to the lead agencies (RPC, LADOTD and FHWA) during a meeting on February 6th, 2014. The group then discussed the matrix and impacts (positive and negative) of each alternative:

All present agreed one of the more important items was how the project met the Purpose and Need, and that Alternative AP-6B provided better port and truck access as it would intersect directly with the soon-to-be-improved port access road (LA 637/W. 10th St) that linked River Road to US 61.

Another beneficial impact was discussed -- that of reduced emergency response time. It was noted that at the public meetings and at previous agency meetings, fire, police and EMS officials stated that AP-6B would be a tremendous benefit, but that P-1 would not benefit their operations in reaching incidents on I-10 between the Belle Terre and the LA 641 interchanges.

It was noted that the economic impact analysis indicated a net benefit of $103 million for AP-6B and $99 million for P-1, both higher than the estimated cost of each alternative ($77 million and $75 million respectively).

It was noted that the wetland impacts of the two build alternatives --proably the largest impact requiring mitigation-- were very similar --36.63 acres for Alternative AP-6B and 35.40 acres for P-1.

It was the consensus among the lead agencies that Alternative AP-6B was the preferred alternative for best meeting the purpose and need of the project, and as it was most beneficial in terms of impacts.

It should be noted that as of the date of this document, there is no current funding source identified for designing or constructing this project.

CHAPTER I

INTRODUCTION, BACKGROUND, PURPOSE & NEED, AND REPORT ORGANIZATION

INTRODUCTION AND NEPA REQUIREMENTS

This report is an Environmental Impact Statement (EIS) being prepared as a requirement of the National Environmental Policy Act (NEPA). NEPA was enacted in 1969 in the United States to encourage sustainable development and informed decision-making in a manner acceptable to the United States' citizens and government agencies. NEPA requires that every federal action or federally funded project be evaluated on its merits by the federal sponsor agency. Public involvement was identified as a key component of the NEPA planning process. Effects to the human and natural environment, as well as the relative benefits of the project alternatives must be evaluated and presented to the public, tribal interests, resource agencies having jurisdictional interests in the project, and to decision-makers.

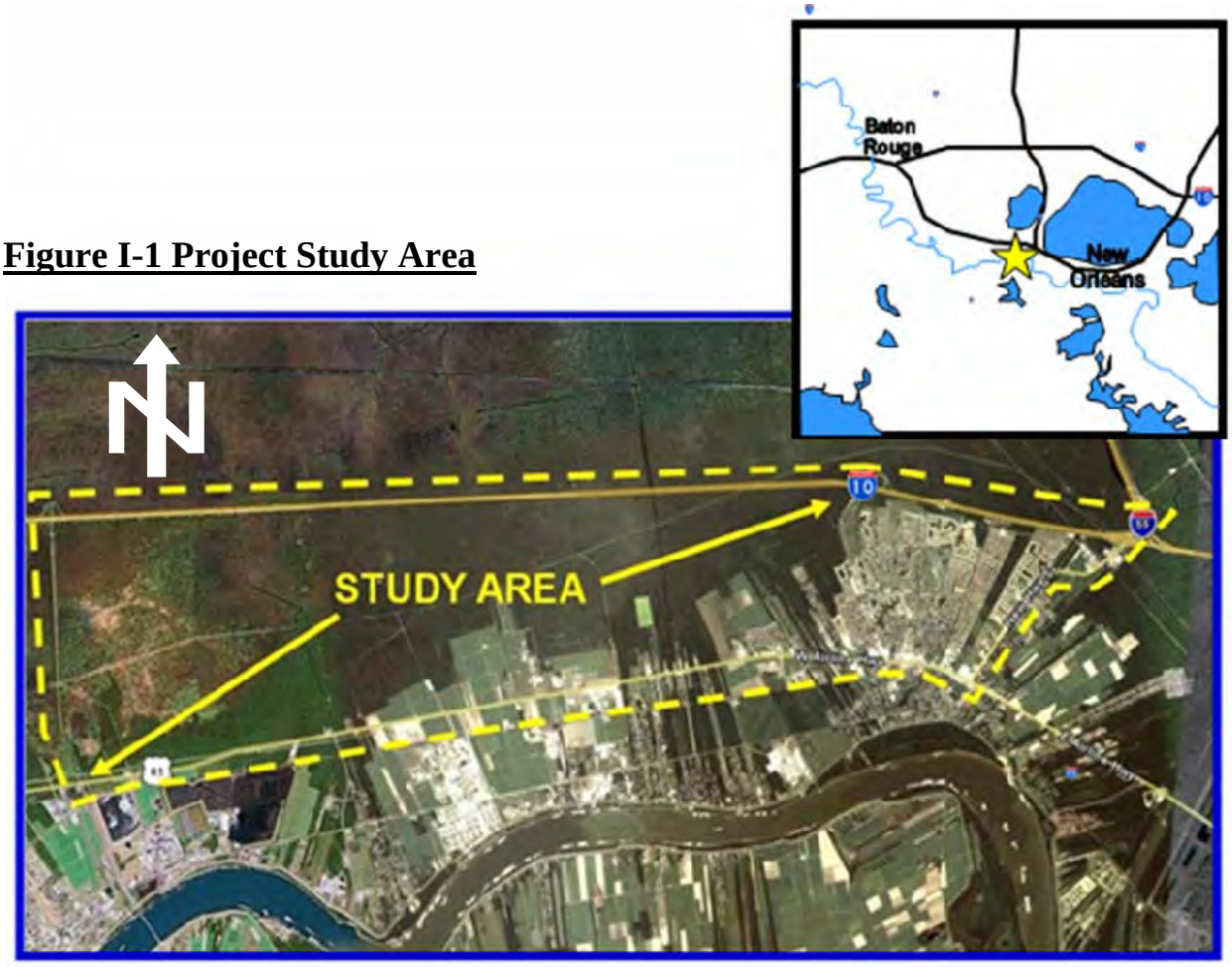
This chapter provides background on and identifies the purpose and need for the proposed St. John the Baptist I-10 Connector Project. It also provides a summary of the report's organization.

BACKGROUND

PROJECT LOCATION

The proposed project is located in the greater New Orleans metropolitan region in southeast Louisiana, in St. John the Baptist Parish. The project location is entirely within the east bank of the Mississippi River. The initial logical termini, or project limits, for the EIS study area and National Environmental Policy Act (NEPA) documentation extended from ¼ mile to the east of US 51 on the east to ¼ mile to the west of LA 641 on the west, and from ¼ mile north of I-10 on the north to ¼ mile south of US 61 on the south, as shown in **Figure I-1** on the following page. Logical termini must encompass a project segment of sufficient length to evaluate project effects, provide a boundary of a project segment that has independent utility, and not restrict any future connector improvements to the project.

Figure I-1 Project Study Area



PROJECT HISTORY

The Port of South Louisiana has experienced significant growth over the last few years, and looks to continue this growth into the future. Concurrently, the east bank of St. John the Baptist has also experienced growth and hopes to have continued economic growth in the future. Continued growth of the Port and the commercial/industrial component of the Parish are vital to the economic recovery of the region. However, one of the impediments to further development has been access to the interstate for Port and other commercial traffic. While port facilities exist along a 54-mile stretch of the Mississippi River, the main focus of port activities and need for port access has been focused in the Reserve area. Unfortunately, Reserve has no direct connection to the interstate system. Interchanges with I-10, the nearest interstate highway lie either eight miles to the east at Highway 3188 or twelve miles to the west at Highway 641. Access to I-10 from the port facilities at Reserve via either of these routes is circuitous, using one of three state highways to access US 61, then traveling either west or east along this congested

commercial thoroughfare to the state highways linking to I-10. The routes also pass through residential areas.

In order to address the Port access issues, an Environmental Assessment was undertaken beginning in 2002. The *Port of South Louisiana Draft Environmental Assessment* was completed in August 2004, followed by a public review period. As there were several major issues raised by agencies such as the US Army Corps of Engineers and US Fish and Wildlife Service, as well as concerns expressed by some residents and environmental groups, it was the agreement of the LADOTD, FHWA, Port of South Louisiana, and St. John the Baptist Parish that a more far-reaching study-- an Environmental Impact Statement-- would be needed.

As a result, the Regional Planning Commission authorized an Environmental Impact Statement (EIS) for Port of South Louisiana and St. John Parish enhanced interstate access. Under the new federal guidelines and regulations for an EIS, there was to be substantial opportunity for input by the participating agencies and the public. The project was also divided into two phases. Phase I more or less tracked the traditional scoping process, and included the initial work on the project, including *Project Initiation, Agency Identification and Initiation*, development of the *Coordination Plan and Schedule*, the *Development of Purpose and Need*, and *Alternative Development and Consideration*. If, after the *Alternative Development and Consideration* process was complete and TSM, and/or Build Alternatives were included as Initial Alternatives, then the project would move forward into Phase II, which includes evaluation and screening of the list of initial alternatives into candidate alternatives, conceptual design and cost estimates of the candidate alternatives, an Impact Analysis of those candidate alternatives, and preparation of a *Draft Environmental Impact Statement* (DEIS) followed by completion of a *Final Environmental Impact Statement* (FEIS) and *Record of Decision* (ROD).

PURPOSE AND NEED

PURPOSE OF THE PROJECT

The purpose of this project is to provide improved access between the US 61 (Airline Highway) corridor in the Reserve area north to I-10, for (1) general commercial and non-commercial traffic in the Parish, and for (2) the Port of South Louisiana.

NEED FOR THE PROJECT

General Commercial and Non-Commercial Access

Interstate 10 is a major east-west roadway for traffic crossing St. John the Baptist Parish. One of only two interstate facilities within the parish, (the other being I-55, which intersects with I-10), I-10 not only services vehicular traffic passing through St. John the Baptist Parish, but also serves to some degree traffic which originates and terminates from within the Parish. The

interstate offers Parish residents and businesses a limited-access route to the rest of the continental U.S. via the interstate system.

Parish officials and parish residents have expressed their desire for quicker and more direct routes to I-10 from the US 61 corridor. The intent is to provide reliable access for residents and area citizens. This includes trips from the Parish to surrounding areas for employment-related commuting, shopping, and educational and medical services, and from surrounding areas to the Parish for similar trips, particularly employment-related trips to industrial areas along the river corridor. Additionally, better access routes are desired in order to reduce vehicle hours traveled (VHT) and to provide travel time savings and benefits which will accrue to those living, working, and/or traveling to and from the developed areas of the Parish. As it stands currently, with approximately fifteen miles of roadway within St. John the Baptist Parish, I-10 has two exits or access points: the Belle Terre exit (Hwy 3188) and the US 51 exit. Compounding the access issue is that west of Belle Terre the next access point is eleven (11) miles away in St. James Parish (the interchange with LA Hwy 641).

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Port Access

The Port of South Louisiana and local officials have expressed a need for better access for Port truck traffic to facilitate the recent trend of economic growth of the Port and the region as a whole. In the wake of Hurricane Katrina and its impact on the New Orleans metro area, continued growth of the Port and the associated commercial/industrial component of the Parish are seen as vital to the economic recovery of the region. However, one of the impediments to further development has been access to the interstate for Port. While port facilities exist along a 54-mile stretch of the Mississippi River, the main focus of port activities and need for port access has been focused in the Reserve area. Unfortunately, Reserve has no direct connection to the interstate system. Interchanges with I-10, the nearest interstate highway, lie either eight miles to the east at Highway 3188 or twelve miles to the west at Highway 641. Access to I-10 from the port facilities at Reserve via either of these routes is circuitous, using one of three state highways to access US 61, then traveling either west or east along this congested commercial thoroughfare to the state highways linking to I-10. A more direct access route to I-10 will facilitate Port-related traffic.

Secondarily, Parish officials and citizens have expressed the strong desire to lessen the impact of Port truck traffic on local roads. In particular, they would like to lessen the amount of truck

traffic currently passing through residential areas, such as the Belle Terre area. They would also like to lessen the impact of truck traffic as it affects current congestion levels on US 61. A more direct access route to I-10 will help to accomplish both of these goals.

REPORT ORGANIZATION

CHAPTER I – INTRODUCTION, BACKGROUND, PURPOSE & NEED, AND REPORT ORGANIZATION

CHAPTER II - ALTERNATIVE DEVELOPMENT AND CONSIDERATION

Chapter II provides an in-depth look at the development of project alternatives under this specific Environmental Impact Statement (EIS) process, which was accomplished with a combination of public involvement and input and technical expertise on behalf of the project team. The genesis of the process goes back to the original Environmental Assessment, and under this EIS process re-started during the Early Involvement/Scoping process, which led to an establishment of eleven (11) Initial Alternatives, including a TSM Alternative and a No Build Alternative. The evaluation and screening of the nine (9) Initial Build Alternatives based on project-relevant criteria is then chronicled in the chapter. The Chapter continues with a discussion of the refinement of the remaining four *Candidate Alternatives* that were analyzed during the Impacts Analysis portion of the project. The Chapter concludes with a full discussion of these final four *Candidate Alternatives* includes design criteria, cross sections, plan view drawings, construction cost estimates, and maintenance cost estimates.

CHAPTER II – THE AFFECTED ENVIRONMENT

In this chapter, the areas of primary impact and the overall project study are first delineated and described. The existing transportation system, including existing highways and roadways, rail, transit and pedestrian facilities are presented. The Chapter concludes with an examination of the affected human and natural environment for the project.

CHAPTER IV – ENVIRONMENTAL IMPACT ANALYSIS

In this chapter, the impacts of the four alternatives considered (the No Build Alternative, the TSM Alternative and the two Build Alternatives) are assessed relative to the evaluation categories of transportation and traffic, human environment, and the natural environment.

CHAPTER V – IMPACT SUMMARY, MITIGATION MEASURES, COMMITMENTS AND PERMITS

In this Chapter, the Direct Impacts to the transportation system and the human and natural environments as a result of the implementation of each alternative are summarized. For unavoidable adverse impacts, this chapter provides a discussion of mitigation measures recommended to reduce those adverse effects. The indirect and cumulative impacts of the Alternatives are also examined in this chapter. Any commitments made to further the project are then described. Permits required to complete each alternative are then listed.

CHAPTER VI – PUBLIC PARTICIPATION, AGENCY COMMENTS AND COORDINATION

This chapter describes the public participation process for the project, including a summary of the Phase I early involvement process as well as documentation of public meetings and hearings and coordination efforts associated with the development of the project through the Phase II portion of the project. These efforts include meetings with lead agencies (RPC, LADOTD, and FHWA), other agencies, and elected officials, and correspondence received during the project.

CHAPTER VII – REFERENCES AND APPENDIX

The Environmental Impact Statement concludes with this chapter. The References section lists publications, websites and other sources of information used in the writing of this document. The included Appendix lists the stand-alone documents and other data which were completed as part of this EIS and are considered part of this EIS. The included Appendix also includes a utility disposition table listing the public and private utilities identified within the roadway alternative alignments, which were used in preparing the conceptual cost estimates of the alternatives.

Under separate file from this document, the stand-alone Appendix file also includes formal agency correspondence received during the both the Phase I and Phase II portions of the project, as well as information from the Public Meetings and Public Hearing, including Meeting Notices and advertisements, sign-in sheets, and written comment forms.

CHAPTER II

ALTERNATIVE DEVELOPMENT AND CONSIDERATION

Chapter II provides an in-depth look at the development of project alternatives under this specific Environmental Impact Statement (EIS) process, which was accomplished with a combination of public involvement and input and technical expertise on behalf of the project team. The genesis of the process goes back to the original Environmental Assessment, and under this EIS process re-started during the Early Involvement/Scoping process, which led to an establishment of fifteen (15) Preliminary Alternatives, including a TSM Alternative and a No Build Alternative. The evaluation and screening of the nine (9) Initial Build Alternatives based on project-relevant criteria is then chronicled in the chapter. The Chapter continues with a discussion of the refinement of the remaining four *Candidate Alternatives* that were analyzed during the Impacts Analysis portion of the project. The Chapter concludes with a full discussion of these final four *Candidate Alternatives* includes design criteria, cross sections, plan view drawings, construction cost estimates, and maintenance cost estimates.

ALTERNATIVE DEVELOPMENT PROCESS

ORIGINAL ENVIRONMENTAL ASSESSMENT

The original efforts to develop alternatives began in 2002, under the original *Port of South Louisiana (POSL) Connector Environmental Assessment*. In agency meetings held on April 24 and June 6th of that year, alternatives were openly discussed and suggested by all in attendance and drawn on a base map of the study area. Additionally, the consultant team on that project added several more alternatives for consideration. By June 6th meeting, seven alternatives remained. A little over a year later, an eighth alternative, AP-6B, was suggested for evaluation. All eight alternatives were evaluated within the draft EA document[1].

PRELIMINARY ALTERNATIVES

Under the Phase I early involvement portion of this Environmental Impact Statement process, it was decided by the agencies involved to start the alternative development process (particularly the development of build alternatives) "from scratch" and have a wide open, inclusive process for alternative development and consideration. The previously developed EA alternatives -- including those that were eliminated from consideration in the EA -- were presented and discussed at an Agency Scoping Meeting

[1] *Port of South Louisiana (POSL) Connector, Draft Environmental Assessment, August 2004, LADOTD,*

on August 4th, 2009 and the Public Scoping Meeting on August 5th, 2009. Some were recommended for further evaluation, while others were recommended for elimination. Several other alternatives were also suggested for consideration by the agencies and the public. As a result there were originally fourteen preliminary alternatives under consideration, which are described below and presented on **Figure II-1** on the following page:

Alternatives recommended for evaluation from the 2004 Draft Environmental Assessment (EA):

- **AP-2** - This alternative extends from US 61 almost due north to I-10. At US 61, its alignment would connect with Marathon Avenue.

- **AP-7** - This alternative extends almost due north from US 61 to I-10 and is located just east of the St. John Airport and just west of the Louisiana National Guard Facility. At US 61, its alignment would connect to West 19th Street.

- **AP-6** - This alternative extends north from US 61 to I-10 adjacent to Regala Park. Just north of US 61, its alignment would connect to Rosenwald Street. The alternative would incorporate existing Rosenwald Street with some physical improvements.

- **AP-6B** - This alternative extends north from US 61 to I-10. At US 61, its alignment would connect to LA 637 (W. 10th Street), which extends south to the Port of South Louisiana.

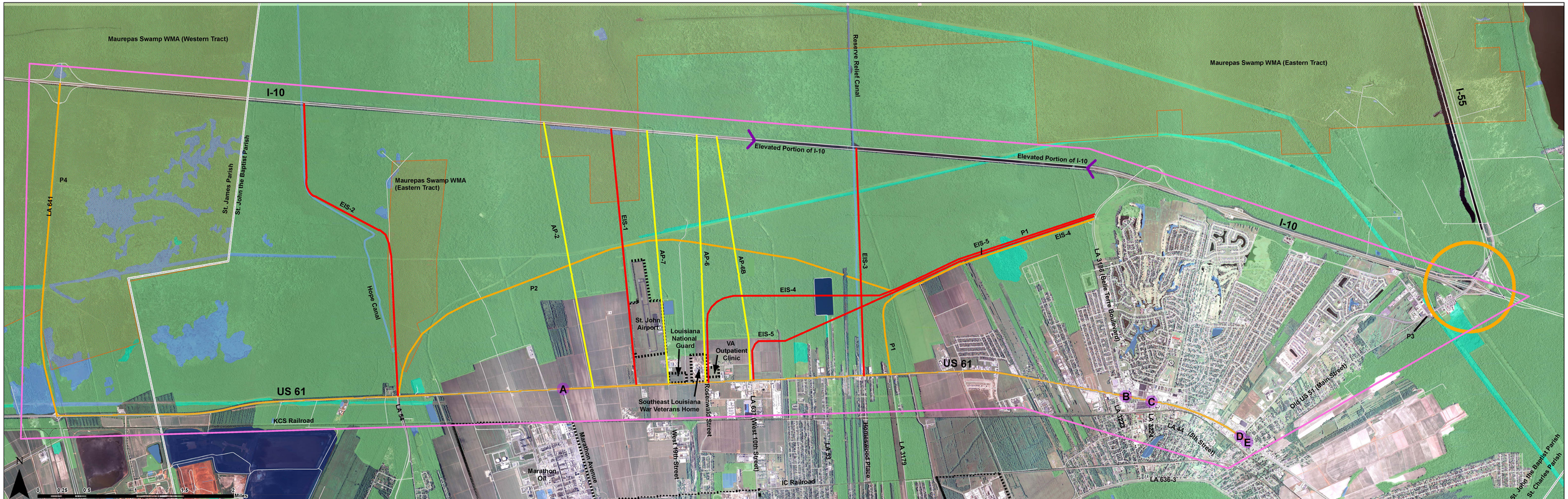
Alternatives eliminated from the 2004 Draft Environmental Assessment which were re-evaluated during the EIS:

- **EIS-1 -** This alternative extends from US 61 just west of the St. John Airport north to I-10.

- **EIS-2**. This alternative extends from US 61 and LA 54 north to I-10.

- **EIS-3 -** This alternative extends north from US 61 to I-10 along the east side of the Reserve Relief Canal. At US 61, its alignment would connect to Homewood Place.

- **EIS-4 -** This alternative extends from US 61 north to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. EIS-4 begins at US 61 as a widening and extension of Rosenwald Street. The route then gradually curves to the east over the wetland areas, eventually turning northeastward along the northern edge of developed areas until intersecting with Belle Terre Boulevard about ½ mile from I-10.



Wetlands
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond and Canal
- Lake

US Fish and Wildlife Service
May 23, 2009

Alternatives

Alternatives recommended for Evaluation from 2004 Environmental Assesment
- AP-2 Extends from US 61 east of Marathon Oil north to I-10
- AP-6 Extends north from US 61 and Rosewald St. to I-10
- AP-6B Extends north from US 61 and LA 637 to I-10
- AP-7 Extends north from US 61 and West 10th St to I-10

Preliminary alternatives from 2004 EA being reevaluated
- EIS-1 Extends from US 61 just west of St. John Airport north to I-10
- EIS-2 Extends north from US 61 to I-10 following the route of the Hope Canal
- EIS-3 Extends from US 61 to I-10 along the east side of the Reserve Relief Canal
- EIS-4 Extends from US 61 north to LA 3188
- EIS-5 Extends from US 61 north to LA 3188

Suggested Alternatives from 2009 Scoping Meetings
- P1 Extends north from LA 3179 and US 61 to LA 3188
- P2 Optional extension of P1 linking US 61 and LA 54 and Alternative P1
- P3 Improvements to intersection area of US 51, I-55 and I-10
- P4 Improvements to LA 641
- Improvements to US-61

Intersection Improvements in Process
- A US 61 at Marathon Avenue (LADOTD)
- B US 61 at LA 3188 Belle Terre Boulevard (LADOTD)
- C US 61 at LA 3224 Hemlock Street (LADOTD)
- D US 61 at New US 51
- E US 61 at Old US 51 Main Street (LADOTD)

- Wildlife Management Area (Louisiana Department of Wildlife and Fisheries, 2001)
- Project Boundary
- Parish Boundary (Louisiana Department of Transportation and Development, 2007)

Figure II-1 Preliminary Alternatives September 2009
Airline Highway (US 61) to Interstate 10
Proposed Connector EIS

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Prepared by: ASSOCIATES, INC. ENGINEERS • HYDROLOGISTS • PLANNERS PROGRAM & PROJECT MANAGERS

- **EIS-5 -** This alternative extends from US 61 north to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. EIS-5 begins at the intersection of US 61 and LA 637 (W. 10th St.). After proceeding north for a short distance, the route turns to the east at the rear of the agricultural fields, and does not enter wetland areas until the vicinity of the Godchaux Canal. The alternative proceeds on a northeasterly heading along the northern edge of developed areas until intersecting with Belle Terre Boulevard about ½ mile from I-10.

Additional suggested alternatives from Phase I EIS scoping process:

- **P-1** - This citizen-suggested alternative extends north from US 61 to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. The alternative begins as an extension of LA 3179 (E. 22nd Street) at US 61, and proceeds north over the wetland areas, gradually curving to the northwest. It shares the same alignment as EIS-4 and 5 near the northern edge of developed areas eventually intersecting with Belle Terre Boulevard about ½ mile from I-10.

- **P-2 -** This citizen-suggested alternative is an adjunct to Alternative P-1 and begins at US 61 and LA 54. It proceeds north for a short distance then veers east, passing north of agricultural fields and through the wetland areas. It intersects with P-1 north of LA 3179, at the point where P-1 veers towards the east.

- **P-3 -** This alternative was suggested as an improvement to the intersection area of US 51, I-55 and I-10. The proponent noted that in hurricane and storm surge situations, the access to I-10 and I-55 via US-51 is often flooded and unavailable. Similarly, as there is no direct connection between eastbound I-10 and northbound I-55 / southbound I-55/westbound I-10, those movements are also unavailable. Several improvements to this interchange will be explored under this alternative to improve interstate access. These may include elevated ramps or connections between the three highways (I-10, US 51 and I-55).

- **P-4** - Requested by regulatory division staff of the US Army Corps of Engineers in a Dec. 1st, 2009 meeting, this alternative includes the improvement of LA 641 between US 61 and I-10, primarily by increasing the lane capacity from 2 lanes to four lanes.

- **Improvements to US 61** – During the scoping process it was noted that one of the problems with traffic congestion along US 61 is the lack of acceleration lanes (or the lack of sufficiently long acceleration lanes) for trucks turning right (east) off of side roads or highways. These trucks must immediately enter the right lane of eastbound US 61, as they take longer to accelerate, slow down the traffic flow in that lane. It was noted that there are currently three merge lanes near the Marathon Oil facility that are being extended in order to allow large trucks more space to get up to speed without holding up traffic. Additionally, it was noted that there are also five intersections noted for improvements along US 61: Old 51 at

US 61; Main Street at US 61; Hemlock Street (LA 3224) at US 61; Belle Terre (LA 3188) at US 61; and the entrance to Marathon (which, in addition to merge lanes earlier mentioned, will be signalized). It was suggested that similar improvements along US 61 at other locations should also be considered as an initial alternative. This alternative would be further developed as the required Transportation System Management (TSM) Alternative.

INITIAL ALTERNATIVES

The fifteen (15) preliminary alternatives (thirteen build, one required TSM Alternative, and the No Build Alternative) were then reviewed by the agencies and the public during the second round of Phase I meetings in November 2009. Comments were received from both, and the preliminary recommendation was to remove four (4) of the build alternatives from further consideration in an Agency meeting on January 13, 2010. The four alternatives removed are listed below, each with their reason for elimination:

- EIS-1 - Passes through the WMA, proximity to airport runway and navigation beacon.

- EIS-2: Passes through the WMA and is close to a future freshwater diversion project.

- P-2: This alternative passes through the WMA and spans the most wetlands of any of the alternatives. It was noted that this suggested alternative was not a primary route, but an "adjunct" of the main alignment suggested (P-1). It was determined that this alternative was outside of the Purpose and Need of this project as it acted more as a bypass of US 61, and did not serve as an alternative on its own. .

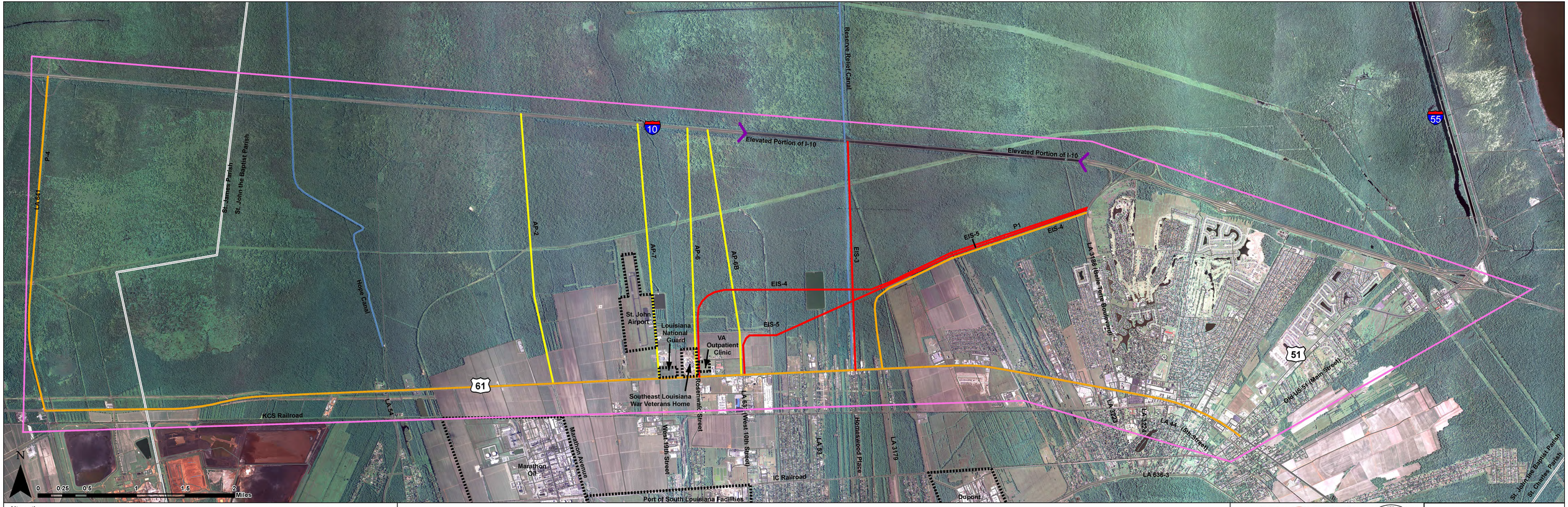
- P-3: While this alternative addresses a known problem, flooding at the US 51/I-10/I-55 interchange, it is an incomplete interchange, and the issues associated with its status are different from those being addressed in the project. It is outside of the Purpose and Need.

Thus, at the end of the Phase I portion of the project, there were eleven (11) **initial alternatives** (nine build alternatives, one TSM alternative, and the No Build Alternative).

EVALUATION AND SCREENING OF INITIAL BUILD ALTERNATIVES

BACKGROUND

As noted above, following Phase I of the project, there were nine (9) conceptual build alternatives under consideration. These nine alternatives are presented on **Figure II-2** on the following page, and described below. For purposes of review, they are presented



Alternatives

- AP-2 Extends from US 61 and Marathon Ave north to I-10
- AP-6 Extends north from US 61 and Rosenwald St to I-10
- AP-6B Extends north from US 61 and LA 637 to I-10
- AP-7 Extends north from US 61 and West 19th St to I-10
- P1 Extends north from LA 3179 and US 61 to LA 3188
- P4 Upgraded LA 641
- TSM Improvements to US-61
- EIS-3 Extends north from US 61 to I-10 along the east side of the Reserve Relief Canal
- EIS-4 Extends from US 61 north to LA 3188
- EIS-5 Extends from US 61 north to LA 3188

Project Boundary

Figure II-2 Initial Alternatives
Airline Highway (US 61) to Interstate 10
Proposed Connector EIS

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

REGIONAL PLANNING COMMISSION

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below and through the remainder of this section in geographical order from the westernmost alternative to the easternmost alternative.

P-4 - Requested by regulatory division staff of the US Army Corps of Engineers in a Dec. 1st, 2009 meeting, this alternative includes the improvement of LA 641 between US 61 and I-10, primarily by increasing the lane capacity from two lanes to four lanes. Based on current traffic volumes and LADOTD standards, the widening would require construction of a four lane highway with median.

AP-2 - This alternative extends from US 61 almost due north to I-10. At US 61, its alignment would connect with Marathon Avenue.

AP-7 - This alternative extends almost due north from US 61 to I-10 and is located just east of the St. John Airport and just west of the Louisiana National Guard Facility. At US 61, its alignment would connect to West 19th Street. The alternative would involve the incorporation of existing Airport Road with some physical improvements.

AP-6 - This alternative extends north from US 61 to I-10 adjacent to Regala Park. Just north of US 61, its alignment would connect to Veterans Blvd., which is a northern extension of Rosenwald Street. The alternative would involve the incorporation of existing Veterans Blvd. with some physical improvements.

EIS-4 - This alternative extends from US 61 north to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. EIS-4 begins at US 61 as a widening and extension of Veterans Blvd. The route then gradually curves to the east over the wetland areas, eventually turning northeastward past the northern edge of developed areas until intersecting with Belle Terre Boulevard at the stub-out for the planned Woodland Drive extension, about ½ mile from I-10.

EIS-5 - This alternative extends from US 61 north to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. At US 61, its alignment would connect to Regala Park Drive, which is a northern extension of LA 637 (W. 10th Street), which extends south to the Port of South Louisiana and is planned for future roadway upgrades. The alternative would involve the incorporation of existing Regala Park Drive with some physical improvements. After proceeding north for a short distance, the route turns to the east at the rear of the agricultural fields, and does not enter wetland areas until the vicinity of the Godchaux Canal. The alternative proceeds on a northeasterly heading past the northern edge of developed areas until intersecting with Belle Terre Boulevard at the stub-out for the planned Woodland Drive extension, about ½ mile from I-10.

AP-6B - This alternative extends north from US 61 to I-10. At US 61, its alignment would connect to Regala Park Drive, which is a northern extension of LA 637 (W. 10th Street), which extends south to the Port of South Louisiana and is planned for future roadway upgrades. The alternative would involve the incorporation of existing Regala Park Drive with some physical improvements.

EIS-3 - This alternative extends north from US 61 to I-10 along the east side of the Reserve Relief Canal. At US 61, its alignment would connect to Homeswood Place.
P-1 - This alternative extends north from US 61 to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. The alternative begins as an extension of LA 3179 (E. 22nd Street) at US 61, and proceeds north over the wetland areas, gradually curving to the northwest. It shares the same alignment as EIS-4 and EIS-5 past the northern edge of developed areas eventually intersecting with Belle Terre Boulevard at the stub-out for the planned Woodland Drive extension, about ½ mile from I-10.

EVALUATION PROCESS

The original Scope of Work under the contract called for the initial build alternatives to first be evaluated based on criteria agreed to by the lead agencies. Possible criteria listed under the original scope included order of magnitude cost estimates, environmental constraints (wetlands, hazardous waste sites, endangered species, etc.) and anticipated human environment impacts (relocations, visual impacts, noise impacts, etc.). This evaluation was intended to be done with readily available or easily developed data, and following the evaluation of the initial build alternatives, the initial build alternatives were to be screened such that a maximum of two (2) build alternatives would be carried forward in the process. These one or two build alternatives along with the No-Build Alternative and the Transportation Systems Management (TSM) Alternative would then be more fully developed as *candidate alternatives* and analyzed in terms of likely impacts. The evaluation criteria were to be developed with the input and approval of the Lead, Cooperating, and Participating Agencies, with an effort to be made towards a consensus among all agencies as to which two build alternatives would be carried forward based on those criteria.

During the evaluation process, the US Army Corps of Engineers stated that for its concurrence with the process as the sole Cooperating Agency on the project, a different focus was needed. Rather than a broad-based initial evaluation process concluded with a consensus among the Lead, Cooperating and Participating Agencies, the initial screening would have to more closely follow the Corps procedure of determining the "least damaging practicable alternative" (LDPA), with a distinct screening process focused on "least damaging" – **as the project relates to wetlands** - and "practicability". According to the Corps, practicable alternatives are those alternatives that are "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes."

The project team then altered its process to more closely follow the Corps approach.

CONCEPTUAL ENGINEERING OF INITIAL BUILD ALTERNATIVES

The Phase I process had only used schematic alignments on maps indicating each alternative. As an initial step to better analyze the screening of the initial build alternatives, some initial conceptual engineering was done. Design criteria were established, and cross sections developed. These included:

- a roadway widening cross section for alternative P-4;
- elevated roadway for sections of alternatives that extend over wetlands;
- at-grade roadway sections for sections of alternatives that extend through non-wetland areas; and,
- Ramps and overpass cross sections were also developed to calculate costs for those alternatives that include a new interchange. The conceptual interchange was standardized for all alternatives, was based on the existing Belle Terre interchange and conceptually designed so as to limit the impact on wetlands in the vicinity of any interchange.

Although not used in the evaluation and screening process, conceptual-level cost estimates were also developed. Conceptual cost estimates for each alternative were determined based on a unit cost (construction cost per linear foot) of typical roadway, using then-current 2010 cost figures supplied by LADOTD. At this conceptual level, signalization and right-of-way costs were *not* included, but all estimates included a 25% contingency.

EVALUATION AND SCREENING OF INITIAL BUILD ALTERNATIVES

The methodology behind each criterion, as well as the relative scoring for each layout alternative under each criterion, is explained below. An *Evaluation and Screening Matrix* showing the findings for all nine alternatives under these eight criteria is presented at the end of this section as Table II-8.

Screening Criteria Related to Practicability

As mentioned earlier, practicable alternatives are defined as those alternatives that are "available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." The Conceptual Engineering of the Alternatives showed that the alternatives were all practicable in terms of cost and existing technology; the only remaining variable in terms of practicability is then *logistics in light of overall project purposes.* As a result, this first set of screening criteria is designed to evaluate whether or not an alternative is practicable *by whether or not it adequately meets the project's purpose and need.* As stated earlier in the document, the purpose and need has several aspects, but the primary aspect is improved access. How well access is improved can be gauged by measuring the travel time savings of each alternative.

For purposes of this first level of screening, two analyses and evaluation were completed:

- The first measure of travel time savings is for regular vehicular traffic, which includes discussion as to directional split, traffic volumes, and *gross* travel times savings.
- The second measure of travel time savings refers to savings for emergency vehicles responding to calls along I-10 between the Belle Terre and Lutcher exits, which includes *average* travel time savings for emergency vehicles.

Improved Access / Travel Time Savings for Regular Vehicular Traffic

Methodology

Basic Travel Time Trip Analysis

For analysis purposes, it was determined to use several different measurement points so as to provide a full range of typical and likely trips that relate to the project's objective of improving access between Reserve and I-10. First, there were destination points taken for the origin of typical trips within the project area. As the purpose of this project is to provide better access from US 61 in Reserve to I-10, the origin point was located along US 61 in the Reserve area. With data derived from US census information, a centroid point based on population in the Reserve area was used. This was determined to be at US 61's intersection with Central Avenue: as its name implies, the traditional center of the Reserve community.

Destination points were then located along I-10. One was set for eastbound traffic at the intersection of US Hwy 51 and I-10, as this represents a "decision point" where motorists and commercial trucks decide whether to continue east bound on I-10 towards New Orleans or whether they will turn northbound and access I-55. The point determined for west bound traffic was placed at the crossover intersection of I-10 and US 61, as this also represents a similar decision point for motorists and commercial truck traffic.

As a result, each alternative would feature two (2) different travel time savings "runs": travel from the automotive origin point to the east destination point, and to the west destination points.

The next step in the analysis was with to gather average travel times for roadway segments along US 61, LA 3188 (Bell Terre) US 51, US 641, and I-10. These were gathered for both morning and evening peak hours. It was decided that for analysis purposes, the PM peak times would be used, as these represented the most congested time periods for travel. It should be noted that the PM peak runs did include one of the larger traffic generators along US 61, the shift change activities at Marathon Oil. To the greatest extent possible, both directions of every run segment were performed; however, for segments of I-10, LA 641 and US 61 (between LA 641 and I-10) the same time values for both directions were used as free flow speeds were easily attainable and uninterrupted.

An existing conditions, "No-Build" scenario was then determined for the two runs on each alternative, using the quickest routes available. It was found that based on the travel time survey, trips to the east destination point favored using US 61 to US 51 to I-10, while on trips to west, it was found that it was quicker to use US 61 all the way to the I-10 / US 61 crossover intersection, rather than accessing I-10 via LA 641.

For travel times on each alternative that involved building a new roadway section, a projected design speed for a new, no access roadway was projected to be 55 mph, which is the current posted speed on LA Hwy 641.

Using the existing travel time information and the projected design speeds, a scenario was then calculated for each alternative, each containing the two "runs" between the destination and origin points. These were then compared to the No Build Scenario. Wherever the projected travel time for the alternative was less than that of the No Build scenario, there was a travel time savings. Whenever it was higher, it was determined that the existing route between an origin and destination point was quicker and there were no travel savings.

Origin-Destination Survey

While the travel time trip analysis provided a good measure of travel time savings for each alternative on an individual "typical" trip basis, it did not address the percentage or volume of vehicles taking those trips. As an example, one alternative may save 5 minutes on a trip west and 30 seconds on a trip east, while another alternative may save 5 minutes on a trip east and 30 seconds on a trip west. If most vehicular trips are to the east, the second alternative would clearly be preferred.

To address this question and better evaluate the alternatives, an origin-destination survey was undertaken. The full results are presented in a *Technical Memorandum* present in the Appendices of the EIS document, with the process and summary below:

Process- In advance of the actual survey, traffic volume data was collected via tube counts. **Table II-1** beginning below presents the count data collected during the AM and PM survey.

Table II-1. Count Data

Location	Direction	AM Count	PM Count
US 61 (Airline Highway)	Eastbound	2372	2789
LA 637 (West 10th Street)	Northbound	1203	1308
LA 637 (West 10th Street)	Southbound	139	88
LA 53	Northbound	1224	1718
LA 53	Southbound	1099	1860
LA 3179 (E. 22nd Street)	Northbound	378	455

Table II-1. Count Data (cont.)

Location	Direction	AM Count	PM Count
LA 3179 (E. 22nd Street)	Southbound	381	551
Marathon Avenue	Northbound	109	358
Marathon Avenue	Southbound	152	73
West 19th Street	Northbound	163	277
West 19th Street	Southbound	233	195

On April 13, 2011, the actual post card survey was conducted from 6:00 AM to 10:00 AM and 2:30 PM to 6:30 PM. The time slots were selected with the intent to capture the majority of daily commuters. Post Cards were handed out to motorists at ten (10) selected locations. "TRAFFIC SURVEY AHEAD" signs were also installed on each approach approximately 200' ahead of the survey location to give advanced warning of the survey.

Survey Results - Out of the 3,975 postcards handed out, 645 (16.2%) were returned. Out of the total 645 postcards received, 263 (40.8%) were potential I-10 users. The potential I-10 users were broken down by their general origin and destination. Seven (7) pairs were identified based on the origin and destination of the trips. Of the 263 potential I-10 users, 11 (4.2%) of the trips had uncharacteristic usage of I-10 relative to their indicated origin and destination. These trips were characterized as *other*. **Table II-2**, below, lists the pairs included and the percentage of motorists using each route as well as the percentage of commercial vehicle usage. As can be seen on the Table, of all those surveyed, the largest majority were travelers to/from Reserve having trips to/from the east. The second largest number was travelers to/from Reserve having trips to/from the east, and a surprisingly considerable percent were trips to/from the north (I-55/US 51) which due to roadway geography first require a trip to the east.

Table II-2 - Origin Destination Pairs

Pair	% of Total Potential I-10 Users	% of Potential I-10 Users Using Commercial Vehicles
Reserve to/from the east	54.0	12.7
Reserve to/from the west	14.4	10.5
Reserve to/from the north (I-55/US 51)	9.9	7.7
Gramercy to/from the west	8.0	0.0
LaPlace to/from the west	5.7	6.7
LaPlace to/from the east	3.8	20.0
Other	4.2	N/A

Initial Traffic Modeling

After the completion of the Origin-Destination Survey, Regional Planning Commission staff incorporated information from the survey as well as other recently acquired data into their traffic demand model. RPC staff then performed a set of initial schematic model runs (under future conditions) with the proposed build alternatives in place. During the first set of runs and model adjustment, it was found that there was negligible difference in projected traffic numbers among those alternatives which linked directly to I-10 from the Reserve area (AP-2, AP-7, AP-6, AP-6B, and EIS-3). Similarly, there was negligible difference in projected traffic numbers among those alternatives which started in the Reserve area and linked to I-10 via the Belle Terre interchange (EIS-4, EIS-5, and P-1). As such, generic runs were completed for each of these two scenarios. Output was in Average Daily Traffic (ADT).

The projections from these models runs reinforced the findings of the Origin-Destination Survey, and indicated that the focus of traffic to/from the east would actually intensify over time. These initial runs indicated that a 75% east-north / 25% west split would occur in the implementation year (2020) if a new link from Reserve to I-10 were in place, and an 85% east-north/ 15% west split would occur in design year (2038) if a new link from Reserve to I-10 were in place.

The projections also showed that in the implementation year, a build alternative with a direct link to I-10 would carry more traffic than one which linked to I-10 via the Belle Terre interchange (7302 ADT vs. 5508 ADT), but by the design year, a Belle Terre alternative would carry slightly more vehicles (15,377 ADT, vs. 15,068 ADT for a direct link north from Reserve). Again, this clearly reflects the focus of Reserve traffic to and from I-10 being focused towards the east/north rather than towards the west.

Combining OD Survey Data and Modeling Data with Travel Times

By taking the travel time savings per trip west or east for each alternative, and then pairing that with the projected ADT volume data from the traffic model, total daily minutes of travel times savings were then calculated. This was done for both the implementation year (2020) and the design year (2038). These total travel time projections are presented in **Table II-3** on the following page.

Findings

In terms of an individual trip basis, all of the alternatives resulted in *some* travel times savings, except for P-4, which is a widening of an existing route that is not operating over capacity at present. In short, implementation of P-4 would result in no travel times savings.

Table II-3
Travel Time Calculations

	P-4	AP-2	AP-7	AP-6	EIS-4	EIS-5	AP-6B	EIS-3	P-1
Travel Times Savings *(per trip, presented in Mins.:sec)*	West: 0:00 East: 0:00	West: 1:21 East: 0:00	West: 1:49 East: 0:03	West: 1:55 East: 1:01	West: 0:00 East: 2:08	West: 0:00 East: 2:21	West: 2:18 East: 1:46	West: 1:42 East: 3:38	West: 0:00 East: 3:25
Year 2020 (Implementation Year) Total Daily Travel Time Savings *(minutes per day, gross)*	West: 0 East: 0 TOTAL: 0	West: 2,564 East: 0 TOTAL: 2,564	West: 3,450 East: 270 TOTAL: 3,720	West: 3,640 East: 5,493 TOTAL: 9,133	West: 0 East: 8,695 TOTAL: 8,695	West: 0 East: 9,579 TOTAL: 9,579	West: 4,368 East: 9,545 TOTAL: 13,913	West: 3,228 East: 19,631 TOTAL: 22,859	West: 0 East: 13,926 TOTAL: 13,926
Year 2038 (Design Year) Total Daily Travel Time Savings *(minutes per day, gross)*	West: 0 East: 0 TOTAL: 0	West: 3,051 East: 0 TOTAL: 3,051	West: 4,106 East: 640 TOTAL: 4,746	West: 4,332 East: 13,021 TOTAL: 17,353	West: 0 East: 27,883 TOTAL: 27,883	West: 0 East: 30,715 TOTAL: 30,715	West: 5,198 East: 22,627 TOTAL: 27,825	West: 3,842 East: 46,536 TOTAL: 50,378	West: 0 East: 44,656 TOTAL: 44,656

In regards to total daily travel time savings, certain trends were evident. Alternatives EIS-3 and P-1 had the most daily travel time savings under both the 2020 and the 2038 forecasts. AP-6B had the third most in 2020, while EIS-5 had third most savings in 2038.

Alternatives AP-2 and AP-7 had much less travel times savings than the others—in the 2020 forecasts they had less than half the travel times savings as the next highest alternative, and in the 2038 forecast, they had less than a third of the travel times savings as the next highest alternative.

As a result of their relative lack of time travel savings compared to the other alternatives, **AP-2** and **AP-7** (along with **P-4** which has no travel time savings) were suggested for elimination from further consideration as not being practicable alternatives. .

Improved Access / Travel Time Savings for Emergency Response

Methodology

In addition to the travel time savings study completed for vehicular traffic, a third destination point was included specifically to address travel time savings for emergency vehicles headed towards I-10. This destination point was the midpoint along I-10 between the LA 3188 and LA 641 interchanges (the same origin point was used in these travel time calculations). **Table II-4** below provides a comparison of the time to travel from the starting point to the midpoint under the current no build scenario, the time to travel to the midpoint under each alternative, and the travel time savings (if any) for each alternative.

Table II-4
Travel Times and Travel Time Savings, Emergency Vehicle Access
(All figures in minutes)

Alternative:	From Origin Point to Midpoint (current/No Build Scenario):	From Origin Point to Midpoint (via alternative):	Travel Time Savings:
P-4	15:51	18:11	0
AP-2	15:51	7:05	8:46
AP-7	15:51	5:28	10:23
AP-6	15:51	5:22	10:29
EIS-4	15:51	13:07	2:44
EIS-5	15:51	11:44	4:07
AP-6B	15:51	4:59	10:52
EIS-3	15:51	5:35	10:16
P-1	15:51	10:40	5:11

Preliminary research was also undertaken to determine what may be a preferred time period for response time, in order to gauge if response time improvement could be considered significant. In general, in speaking with local emergency response officials, the adage was that "every minute counts" in response time, and any lessening of response time coming about as a result of improved access would be an improvement. In discussions with the fire chief at the Reserve Central Fire Station, he stated that emergencies on the interstate in the section of I-10 between the Belle Terre and Lutcher exits are referred to departments in either Garyville or Laplace, as it would take far too long for the stations in Reserve to respond. When told that the project was looking at several alternatives that would connect US 61 and Interstate 10, he replied that one of the central connectors could reduce his response times to five minutes.

Additional research found that that the Federal Government has set an eight minute response time as the target that fire departments and rescue squads should strive to meet. This is not mandated, it is merely a target. As well, the eight minute response time target was built around one particular life threatening emergency: sudden cardiac arrest. In the 1970s and 80s, studies suggested that if a cardiac patient could be administered treatment within eight minutes of cardiac arrest, they stood a better chance of survival.

However, it is important to note that that in many rural areas, the idea of an eight minute response time has been dismissed. While a larger metropolitan area can reduce response times by having multiple locations from which to respond from, a small community with limited responders and perhaps a single origin for responders would naturally have higher response times.

Based on this research, it was determined that for purposes of this analysis, a time savings of five minutes would be considered a practicable improvement. Any alternatives not meeting this threshold would be eliminated from further consideration.

As a result of this evaluation and screening, **Alternatives P-4, EIS-4** and **EIS-5** were suggested for elimination from further consideration. It should be noted that Alternative **P-4** was also suggested for elimination based on the travel time savings criterion.

SCREENING CRITERIA RELATED TO "LEAST DAMAGING"

The second set of criteria is designed to best evaluate which of the remaining alternatives (AP-6, AP-6B, EIS-3, and P-1) are the least damaging to the environment. They are further divided into two separate sub categories that are addressed in a specific order: (1) impacts specifically related to wetlands, and (2) other (human environment) impacts.

Impacts Specifically Related to Wetlands

For purposes of this potential wetland impact evaluation, four (4) criteria were used for evaluation. They are listed below:

- Acreage of Wetlands Impacted (general)
- Specific Wetlands Categories:
  - Biological Resource Impacts
  - Water Quality Impacts
  - Physical Resource Impacts

The methodology behind each criterion, as well as the relative scoring for each layout alternative under each criterion, is explained below.

Amount of Wetlands Impacted

Methodology

Under this criterion, the likely amount of wetlands impacted was calculated for each alternative alignment. During Phase I of the project, readily available GIS data were provided by the US Fish and Wildlife Service which indicated the presence of both freshwater emergent wetlands and freshwater forested/shrub wetlands. The alternatives were then laid over these wetland maps to show where the alternatives crossed wetlands.

In order to best calculate acreages likely to be affected, certain assumptions were made:

- Any new roadway would be a two-lane roadway corridor, and where it was shown as crossing wetlands, the roadway would be an elevated structure. Based on conceptual cross-sections for such a structure, a width of 85 feet was estimated.
- For those alternatives that would include a new interchange, the amount of wetlands directly affected by roadway construction was calculated based on the existing LA 3188 interchange as a model for any future interchange. That acreage was determined to be 27.57 acres.

To calculate the amount of acreage impacted, the width was multiplied by the length over wetlands crossed. Where needed, the 27.57 acres for the interchange was also added.

Findings

Table II-5 below presents the wetland acreage calculations for each of the remaining four alternatives.

Table II-5
Wetland Acreage Calculations

Alternative	Length Over Wetlands (feet)	Right of Way Required (feet)	ROW Acres	Interchange Acres	Total Acres
AP-6	10,986	85	21.44	27.57	49.01
AP-6B	10,939	85	21.35	27.57	48.92
EIS-3	11,690	85	22.81	27.57	50.38
P-1	15,740	85	30.71		30.71

Alternative P-1 has the smallest amount of wetlands acreage affected, with 30.71 acres. The other three alternatives all have nearly the same acreage affected, approximately fifty acres.

Biological Resource and Water Quality Impacts

Methodology

Biological resources, rated relative to level of impact for each of the nine build alternatives evaluated, include: (1) special aquatic sites, (2) vegetation, (3) wildlife populations and habitat, (4) Threatened and Endangered (T & E) species, and (5) aquatic resources. Each biological resource was assigned a number from "0" to "3" with regard to level of impact for each alternative relative to all other alternatives. For example, "0" signifies no impact, "1" signifies low impact, "2" signifies medium impact and "3" signifies high impact. The numbers were totaled for the five biological resources for each alternative and the totals ranged from two to six. These totals were divided into three levels of impact: low being "2" or less, medium being "3" and "4" and high being "5" and "6". The following table summarizes the numerical totals and ranking of impact for each biological resource for each alternative evaluated.

Table II-6 – Biological & Water Resource Impact Summary

Alternative	Special Aquatic Sites	Wetland Vegetation	Wildlife Population & Habitat Severance	Threatened & Endangered Species	Aquatic Resources	Total	Ranking of Impact
AP-6	0	3	3	0	0	6	High
AP-6B	0	3	3	0	0	6	High
EIS-3	0	3	1	0	0	4	Medium
P-1	0	1	2	0	0	3	Medium

0 No Impact
1 Low Impact
2 Medium Impact
3 High Impact

Water quality impacts for surface and groundwater resources were ranked according to the potential for: 1) release of contaminants from hazardous waste sites, 2) dispersal of contaminants from road runoff or spills via canals and channels to larger water bodies and larger areas of wetlands, and 3) introduction of contamination into ground water. Because the build alternatives did not cross identified hazardous waste sites and the potential for contamination of ground water is low, the primary ranking of water quality impacts related to the number of water body (e.g., ditch and canal) crossings and potential for dispersal of contaminants throughout a larger area. A low rating was assigned if no water body was crossed. A medium rating was assigned if one water body was crossed and a high rating was assigned if one or more water bodies were crossed or adjacent to the alternative right of way (ROW).

The synthesis of ratings for biological and water quality impacts are presented in the summary matrix of build alternative impacts. Detailed descriptions of the types of biological and water quality impacts are presented for each alternative in the following section based on a brief field reconnaissance, review of aerial photographs and maps and existing documentation.

Findings

Alternative AP-6: This alignment consists of a new roadway extending north from the current terminus of Veterans Blvd. to I-10. It would include an upgrade of Veterans Blvd. to LADOTD highway standards as part of the alternative. Jurisdictional wetlands (e.g., 49.01 ac mostly composed of cypress-tupelo gum swamp, which is difficult to regenerate) are located within approximately 80 percent of the proposed alternative ROW and would be permanently impacted. The remaining 20 percent would be used for both the existing Veterans Blvd. ROW and for agriculture purposes. The alternative would pass through a little over a tenth of a mile of land that is currently in agricultural use.

No known locations of T & E species or their habitats are located within or adjacent to the proposed alignment. The AP-6 Alternative would have a potential adverse effect on wildlife because the proposed roadway, located in a cleared ROW, would sever a large tract of contiguous woodland habitat. Even though elevated and much less disruptive to wildlife than built on an earthen embankment, a small, but discernable linear open waterway would likely form below the grade-separated roadway.

Construction activities, including land clearing, filling/cutting/grading, and construction of the roadway and appurtenances, could result in an increase in sedimentation and turbidity. Implementation of an erosion and sediment control plan, utilizing best management practices (BMP) during construction of the roadway, would typically include properly emplaced sediment barriers (e.g., silt fences, staked hay bale barriers, and earthen berms [the latter in non-swamp settings]) for containment of sediments and geotextile fabric, mulch, and/or vegetation, used singularly or in combination on exposed working areas susceptible to erosion (Barrett et al. 1995). Non-point source pollution from vehicles would be expected to flow into adjacent areas with runoff. This alternative also crosses on linear freshwater marsh (a pipeline ROW) that crosses the Reserve Relief Canal to the east. Large-scale releases are assumed to be rare based on the anticipated safety considerations to be incorporated in road design. Both small-scale and large-scale spills/releases have the potential to contaminate local surface waters, contribute to localized vegetation die-off and aquatic species mortality, but are not expected to contribute to an overall decline in water quality. Wetland vegetation in the swamp portion of the project area would contribute to the removal of some pollutants through wetland plant uptake, filtration, assimilation, settling, and microbial decomposition (Barrett et al. 1995, East-West Gateway Coordinating Council 2000). BMP for the post-construction, non-wetland portion of the alignment would likely include planting and maintenance of vegetation in the ROW. The alignment overlies the Mississippi River Alluvial Aquifer and the Chicot Equivalent Aquifer which are located 25 to 150 ft (Todd et al. 2009) and 50 to 1,100 ft (Stuart et al. 1994), respectively, below the surface. While

some small, isolated fresh groundwater resources that are linked to the Mississippi River may exist, the U. S. Geological Survey has not mapped any major freshwater aquifers in the project study area because of saltwater encroachment (Tomaszewski per. comm. 2010). Based on the lack of documented cases, the installation of pilings, associated with construction of the roadway, would not likely create possible avenues for groundwater contamination (Bonnecaze 2010, Walters 2010). According to field observations and database searches from the LDEQ and the EPA, no hazardous or solid waste sites are located within the proposed alternative ROW.

Biological Resources: Rated *High*
Water Quality: Rated *Low*

Alternative AP-6B: This alternate is comprised of a new roadway extending north from the current Regala Park Drive to I-10. A feature of this alignment includes upgrading the north-south portion of Regala Park Drive to LADOTD highway standards. Jurisdictional wetlands (48.92 acres; mostly composed of cypress-tupelo gum swamp, which is difficult to regenerate) are located within approximately 80 percent of the proposed alternative ROW and would be permanently impacted, with the remaining 20 percent being used for both the existing Regala Park Drive ROW and agriculture purposes. The portion of agricultural land in the ROW includes approximately one quarter of a mile of the alignment.

A sensitive avian site has been identified east of the AP-6B Alternative and south of the east-west trending pipeline ditch. This alignment would have a potential adverse effect on wildlife because the proposed roadway, located in a cleared ROW, would sever the large tract of contiguous forested habitat. Even though elevated and much less disruptive to wildlife than a roadway constructed on an earthen embankment, a small linear open waterway would likely form underneath the grade-separated roadway.

Highway construction activities, including land clearing, earth moving with heavy equipment, and construction of the roadway and appurtenances, could result in an increase in sedimentation and turbidity. An erosion and sediment control plan, utilizing best management practices (BMP) during construction of the roadway to minimize adverse impacts, would typically include proper emplacement of sediment barriers (e.g., silt fences, staked hay bale barriers, and earthen berms [the latter in non-swamp settings]) for containment of sediments and geotextile fabric, mulch, and/or vegetation, used singularly or in combination, in disturbed areas susceptible to erosion (Barrett et al. 1995). Non-point source pollution from vehicles would flow into adjacent areas with runoff. Large-scale releases are assumed to be rare based on the anticipated safety considerations to be incorporated in road design. Both small-scale and large-scale spills/releases have the potential to contaminate local surface waters, contribute to localized vegetation die-off and aquatic species mortality, but it is not expected to contribute to an overall decline in water quality. This alternative crosses a freshwater marsh in a pipeline ROW that connects to the Reserve Relief Canal which enters into Lake Maurepas to the north. Wetland vegetation in the swamp portion of the project area

would contribute to the removal of a portion of the pollutants through wetland plant uptake, filtration, assimilation, settling, and microbial decomposition (Barrett et al. 1995, East-West Gateway Coordinating Council 2000). The BMP for the non-wetland portion of the alignment would likely include the planting and maintenance of vegetation in the ROW.

The alignment overlies the Mississippi River Alluvial and Chicot Equivalent Aquifers which are located 25 to 150 ft (Todd et al. 2009) and 50 to 1,100 ft (Stuart et al. 1994), respectively, below the surface. While it is possible there are some small, isolated fresh groundwater resources that are linked to the Mississippi River, the U. S. Geological Survey has not mapped any major freshwater aquifers in the project study area because of saltwater encroachment *(Tomaszewski per. comm. 2010*). Based on the lack of documented cases, the installation of the pilings, associated with construction of the roadway, would not likely create possible avenues for groundwater contamination (*Bonnecaze 2010, Walters 2010*). According to field observations and database searches from the LDEQ and the EPA, no hazardous or solid waste sites are located within the proposed alternative ROW.

Biological Resources: Rated *High*
Water Quality: Rated *Low*

Alternative EIS-3: This proposed roadway alignment extends north from the current intersection of Homewood Place Drive and US 61 to I-10. Jurisdictional wetlands (50.38 ac containing a mixture of cypress-tupelo gum swamp, wet bottomland hardwood and scrub/shrub habitat) are located within most of the proposed alternative ROW and would be permanently impacted, with the exception of the small parking lot for the existing boat launch along the Reserve Relief Canal. No agricultural land is located within this alignment.

No known locations of T & E species or their habitats are located within or adjacent to the proposed alignment. This alternative would have less of a potential effect on wildlife than the other alternatives because the proposed roadway would be adjacent to, and parallel to the Reserve Relief Canal, thus avoiding additional severing of contiguous forested habitat. Even though elevated and much less disruptive to wildlife than roadways built on an earthen embankment, a small, but discernable linear open waterway would likely form underneath the grade-separated roadway, with potential for merging with the Reserve Relief Canal, depending upon distance between the roadway and canal.

Highway construction activities including land clearing, grading, and construction of the roadway and appurtenances could result in an increase in sedimentation and turbidity. An erosion and sediment control plan, utilizing best management practices (BMP) during construction of the roadway to reduce turbid runoff and sedimentation, would typically include proper emplacement of sediment barriers (e.g., silt fences, staked hay bale barriers, and earthen berms [the latter in non-swamp settings]) for containment of sediments and geotextiles, mulch, and/or vegetation, used singularly or in combination, in

disturbed areas susceptible to erosion (Barrett et al. 1995). Non-point source pollution from vehicle traffic and materials released from vehicles (e.g., small-scale fuel and lubricant leaks and particles of heavy metals and other substances) would flow into adjacent areas with runoff. Large-scale releases are assumed to be rare based on the anticipated safety considerations to be incorporated in road design. Both small-scale and large-scale spills/releases have the potential to contaminate local surface waters, contribute to localized vegetation die-off and aquatic species mortality, but it is not expected to contribute to an overall decline in water quality. In addition to paralleling the east side of the Reserve Relief Canal, alternative EIS-3 crosses an east-west trending pipeline ROW containing freshwater marsh that intersects the Reserve Relief Canal. Wetland vegetation in the swamp portion of the project area would contribute to the removal of some of the pollutants through wetland plant uptake, filtration, assimilation, settling, and microbial decomposition (Barrett et al. 1995, East-West Gateway Coordinating Council 2000). The BMP for the non-wetland portion of the alignment would likely include planting/maintenance of vegetation in the ROW. The alignment overlies the Mississippi River Alluvial Aquifer and the Chicot Equivalent Aquifer which are located 25 to 150 ft (Todd et al. 2009) and 50 to 1,100 ft (Stuart et al. 1994), respectively, below the surface. While it is possible there are some small, isolated fresh groundwater resources that are linked to the Mississippi River, the U. S. Geological Survey has not mapped any major freshwater aquifers in the project study area because of saltwater encroachment *(Tomaszewski per. comm. 2010).* Based on the lack of documented cases, the installation of the pilings, associated with construction of the roadway, would not likely create possible avenues for groundwater contamination *(Bonnecaze 2010, Walters 2010*). According to field observations and database searches from the LDEQ and the EPA, no hazardous or solid waste sites are located within the proposed alternative ROW. A convenience store (Moe's Discount) with underground storage tanks is located at 3357 West Airline Hwy and adjacent to this alignment, but should not pose a risk unless an UST-related release occurs.

Biological Resources: Rated *Medium*
Water Quality: Rated *Medium*

Alternative P-1: This includes a new roadway extending north and then east from the current terminus of LA Hwy 3179 at US HWY 61 to LA 3188 at its connection to I-10. Jurisdictional wetlands (30.71 ac of wet bottomland hardwoods and fresh marsh) are located within the proposed ROW and would be permanently impacted. The alternative would pass through a little over a quarter of a mile of land in existing agricultural use. The alignment's location close to existing development and agricultural lands and its east-west orientation reduces its potential adverse effects regarding severance of the large tract of contiguous cypress-tupelo gum swamp habitat. This alignment is close to the toe of the natural levee of the Mississippi River and includes some previously farmed lands that have been abandoned. These abandoned agricultural lands may be developed in the future even without construction of an elevated roadway. No known locations of T & E species or their habitats are located within or adjacent to the proposed alignment.

Highway construction activities that include land clearing, grading, and construction of the roadway and appurtenances could result in an increase in sedimentation and turbidity. Best management practices (BMP), incorporated into an erosion and sediment control plan, would be used during roadway construction for the purpose of reducing potential impacts. Construction BMP would typically include the proper installment of sediment barriers (e.g., silt fences, staked hay bale barriers, and earthen berms [the latter in non-swamp settings]) for containment of soils and geotextile products, mulch, and/or vegetation, used singularly or in combination, in disturbed areas susceptible to erosion *(Barrett et al. 1995).* Non-point source pollution from vehicle traffic and materials released from vehicles would flow into adjacent areas with runoff. Large-scale releases are assumed to be rare based on the anticipated safety considerations to be incorporated in road design. Both small-scale and large-scale spills/releases have the potential to contaminate local surface waters, contribute to localized vegetation die-off and aquatic species mortality, but it is not expected to contribute to an overall decline in water quality. This alignment does not cross any canals leading to Lake Maurepas. Wetland vegetation in the swamp portion of the project area would provide partial removal of pollutants through wetland plant uptake, filtration, assimilation, settling, and microbial decomposition *(Barrett et al. 1995, East-West Gateway Coordinating Council 2000).* The BMP for the non-wetland portion of the alignment would likely include the planting/maintenance of vegetation in the ROW. The alignment overlies the Mississippi River Alluvial Aquifer and the Chicot Equivalent Aquifer which are located 25 to 150 ft *(Todd et al. 2009)* and 50 to 1,100 ft *(Stuart et al. 1994),* respectively, below the surface. Small and isolated fresh groundwater resources that are linked to the Mississippi River may exist, but the U. S. Geological Survey has not mapped any major freshwater aquifers in the project study area because of saltwater encroachment (*Tomaszewski per. comm. 2010).* Based on the lack of documented cases, the installation of the pilings, associated with construction of the roadway, would not likely create possible avenues for groundwater contamination *(Bonnecaze 2010, Walters 2010).* According to field observations and database searches from the LDEQ and the EPA, no hazardous or solid waste sites are located within the proposed alternative ROW.

Biological Resources: Rated *Medium*
Water Quality: Rated *Low*

Physical Resource Impacts

Methodology

As suggested by the US Army Corps of Engineers, physical resource impacts would include impacts to: (1) land features, (2) subsurface geology, and (3) soils. There is very little differentiation between the alternatives in terms of land features and soil types that may be impacted by the proposed new roadways, and there is little if any difference in the amount of impacts to sub-surface geology among the alternatives. Nor are any of the soils types present in the study area considered prime or unique farmland. As such, the

key metric in this presented in this evaluation is the amount of acreage removed from active or potential agricultural use.

Findings

In the following text, the land features and soil types of each alternative are first described, followed by an anticipated impact summary. Each description concludes with a listing of the amount of acreage removed from active or potential agricultural use.

AP-6: AP-6 includes upgrade of an existing road, construction of new at-grade roadway on cleared land, and construction of elevated roadway on structure over undeveloped forested wetland areas. This entire route is very flat in nature, with little if any natural slope. The existing roadway and cleared areas used for construction are located in areas of mostly Cancienne Silt Loam and Schreiver Clay (0 to 1% slopes) with a small portion of Cancienne Silty Clay Loam. This soils are generally used for croplands and residential development, and would not be considered as prime or unique farmlands The remainder of the route through the undeveloped areas would mostly cross Barbary soils (frequently flooded) as well as some areas of Schreiver Clay soils (frequently flooded) both of which are considered unsuitable for croplands.

Due to its using an upgrade to an existing roadway as a portion of its route, AP-6 features relatively little removal of active or potential farmland (2.14 acres). As such, its impact rating is *low.*

AP-6B: AP-6B also includes upgrade of an existing road, construction of new at-grade roadway on cleared land, and construction of elevated roadway on structure over undeveloped forested wetland areas. This entire route is very flat in nature, with little if any natural slope. The existing roadway area and cleared areas to be used for construction consist mostly of Cancienne Silty Clay Loam, with some areas of Schreiver Clay (0 to 1% slopes) and a small area of Cancienne Silt Loam. These soils are generally used for croplands and residential development, and would not be considered as prime or unique farmlands The remainder of the route through the undeveloped areas would mostly cross Barbary soils (frequently flooded) as well as some areas of Schreiver Clay soils (frequently flooded) both of which are considered unsuitable for croplands.

Due to its using an upgrade to an existing roadway as a portion of its route, AP-6 also features relatively little removal of active or potential farmland (4.05 acres). As such, its impact rating is *low*.

EIS-3: This alternative would involve a new roadway along the east side of the Reserve Relief Canal. Nearly all of the roadway, except for the roadway in the immediate vicinity of the intersection with US 61, would be elevated on structure through undeveloped wetlands. This entire route is very flat in nature, with little if any natural slope, and with

a degree of manmade slope west wards toward the Reserve Relief Canal. The area envisioned for the new elevated roadway consists almost equally of Barbary soils (frequently flooded) and Schreiver Clay soils (frequently flooded) both of which are considered unsuitable for croplands. Near US 61, where the canal boat launch is located the route crosses a small area of Schreiver Clay (0 to 1% slopes) which is generally used for croplands and residential development.

EIS-3 also would essentially involve the removal of no active or potential farmland (0 acres). As such, its impact rating is *low*.

P-1: Nearly the entire roadway proposed for this alternative, except for the roadway in the immediate vicinity of the intersection with US 61, would be elevated on structure through undeveloped wetlands as well as over some existing cleared agricultural land. This entire route is very flat in nature, with little if any natural slope. Near US 61, where the route begins, the alignment crosses a small area of Schreiver Clay (0 to 1% slopes) which is generally used for croplands and residential development. After crossing an undeveloped wetland area consisting of mostly Schreiver Clay soils (frequently flooded), the alignment crosses a cleared agricultural area consisting mostly of Schreiver Clay (0 to 1% slopes) with a small portion of Cancienne Silt Loam. The route again then progresses through an undeveloped wetland area consisting of Schreiver Clay soils (frequently flooded).

P-1 would likely involve the removal of 9 acres of active or potential farmland. As such, its impact rating is *medium*.

Summary of Screening Related to "Least Damaging" specifically related to Wetlands Impacts

Other than the category of Amount of Wetlands Impacted, which provides an actual number of acres, the other three categories of evaluation and screening related to wetlands (biological resource impacts, water quality impacts, and physical resource impacts) all are based on a three-level impact rating: low, medium or high. These ratings can easily be converted into an ordinal system (with low =1, medium = 2, and high =3) and then totaled for a composite score. Doing so reveals the following:

Table II-7
"Least Damaging" Screening Criteria - Composite Scoring

Alternative:	Biological Resource Impacts:	Water Quality Impacts:	Physical Resource Impacts:	**Composite Score**
AP-6	High (3)	Low (1)	Low (1)	**7**
AP-6B	High (3)	Low(1)	Low (1)	**6**
EIS-3	Medium (2)	Medium (2)	Low (1)	**8**
P-1	Medium (2)	Low (1)	Medium (2)	**6**

Based upon the above composite scores, **Alternatives AP-6B and P-1** (each with a score of 6) **would be indicated as the least damaging, in terms of wetland impacts, among the remaining alternatives**. This is also reinforced by considering the amount of wetlands potentially impacted. Alternative P-1 has the lowest amount of wetlands potentially impacted (30.71 acres), and Alternative AP-6B has the second lowest amount of wetlands impacted (48.92)

Other (Human Environment) Impacts

Methodology

This criterion involves examining each build alternative in regards to general human environment impacts, focusing in particular on four impact areas:

- likely relocations & displacements,
- impacts associated with utility lines,
- visual impacts, and
- anticipated noise impacts.

Field reconnaissance and review of aerial maps were used to determine the likely impacts for each alternative. For rating, each alternative received a score based on how many of the human environment impact categories were affected:

- 0 to 1 categories – Low
- 2 to 3 categories – Medium
- 4 categories - High

Findings

The scores are presented in the overall matrix, and an explanation of each alternative's score follows:

Alternative AP-6: This alternative also included upgrading an existing roadway, (Veterans Blvd.) for its short length. The roadway is lined with active uses, including a Veterans Administration Outpatient Clinic, the Southwest Lousiana War Veterans Home and the Frank Lapeyrolerie/Leola Montz Council on Aging Activity Center. While there are no major utility lines in this stretch of Veterans Boulevard, the alignment would cross an east-west running pipeline in the wetland areas. Due to the nature of the facilities, there is a small possibility of noise impacts associated with increased traffic. As this alternative involves two human impact categories, it is rated *medium.*

Alternative AP-6B: AP-6B shares the Regala Park alignment portion of EIS-5, and would have the same limited impact in that area. However, where EIS-5 veers east, this alternative continues north directly to I-10, through undeveloped wetlands. AP-6B

crosses the east-west running gas pipeline. As this alternative only affects one impact category, it is rated *low*.

Alternative EIS-3: This alternative begins at the intersection of Homeswood Place and US 61. Although there is no existing roadway north of the intersection of Homeswood and US 61, the alignment generally follows the Reserve Relief Canal due north to I-10. In the immediate vicinity of US 61 is a boat launch on that canal that may be affected by construction. Fishermen and boaters who use the canal would have a definite visual impact, as the elevated roadway would be in view a short distance to the east. As the alignment runs north-south, it also crosses the east-west running pipeline. Interchange construction may require relocation of some fishing camps currently located at the intersection of the canal and I-10. Since this alternative affects three categories, it is rated *high*.

Alternative P-1: This easternmost of the alternatives begins at the intersection of LA 3179 and US 61. There is no existing roadway north of the intersection of LA 3179 and US 61 in this area, and the only development on the north side of US 61 is A3M Vacuum Services, a business located just northwest of the LA 3179 / US 61 intersection. No noise, utility, relocation or visual impacts are anticipated in the area immediately adjacent to US 61. As with EIS-4 and EIS-5, P-1 continues north and east to connect to Belle Terre Boulevard just south of I-10. Between the immediate US 61 area and Belle Terre Boulevard, it is located no closer than ¼ mile from any human habitation, and should have no effect in terms of noise or visual impacts. It does not cross any major utility lines. As P-1 affects no human environment impact categories, it is rated *low*.

CONCLUSIONS OF EVALUATION AND SCREEENING OF INITIAL BUILD ALTERNATIVES

Table II-8 on the second page following presents a comprehensive matrix of the alternatives and how they can be compared in the evaluation and screening process.

To recap, the alternatives were first evaluated and screened on the basis of practicability, with the emphasis being on whether or not the alternative adequately meets the purpose and need of the project, particularly the purpose of improving access between US 61 in Reserve and I-10. As is shown on the chart, Alternatives EIS-5 and EIS-4 were determined to not be practicable as they did not adequately reduce emergency response time. Alternatives AP-2 and AP-7 were determined to be not practicable as they did not provide adequate time travel savings, especially when compared to the other alternatives. Alternative P-4 met neither measure of practicability. As a result, these five alternatives were removed from further consideration.

The remaining four alternatives were then evaluated on the basis of criteria to determine which would be the least damaging, first in terms of wetlands, then in terms of other (human) environment impacts. As shown in the matrix, the amount of potential wetlands impacted under each alternative was first determined, and then each alternative was then

evaluated on the basis of it impacts to three specific aspects of wetland impact categories; biological resource impacts, water quality impacts, and physical resource impacts. The final level of evaluation dealt with human environment impacts.

Based on the evaluation of the four remaining alternatives, **Alternatives AP-6B and P-1 were determined to be the least damaging in terms of potential impacts relating to wetlands. Those alternatives were also the least damaging in terms of other (human environment) impacts.** Thus, these two alternatives (along with the No-Build Alternative and the TSM Alternative) were selected to move forward in the EIS process and be more fully developed as *candidate alternatives* and analyzed in terms of likely impacts.

The Final Build Alternatives are presented in **Figure II-3** on the second page following.

CANDIDATE ALTERNATIVES

Following the evaluation and screening of the Initial Build Alternatives, four (4) Candidate Alternatives remained:

1. No-Build Alternative
2. Transportation Management System (TSM) Alternative
3. Build Alternative AP-6B
4. Build Alternative P-1

As these alternatives would be the ones to undergo full impact analysis in the EIS, each was then fully defined, with the TSM and Build Alternatives undergoing full conceptual engineering.

DEFINITION OF NO BUILD AND TSM ALTERNATIVES

The No-Build and TSM Alternatives are both required for the Draft EIS analysis, and were develop with both public and agency input.

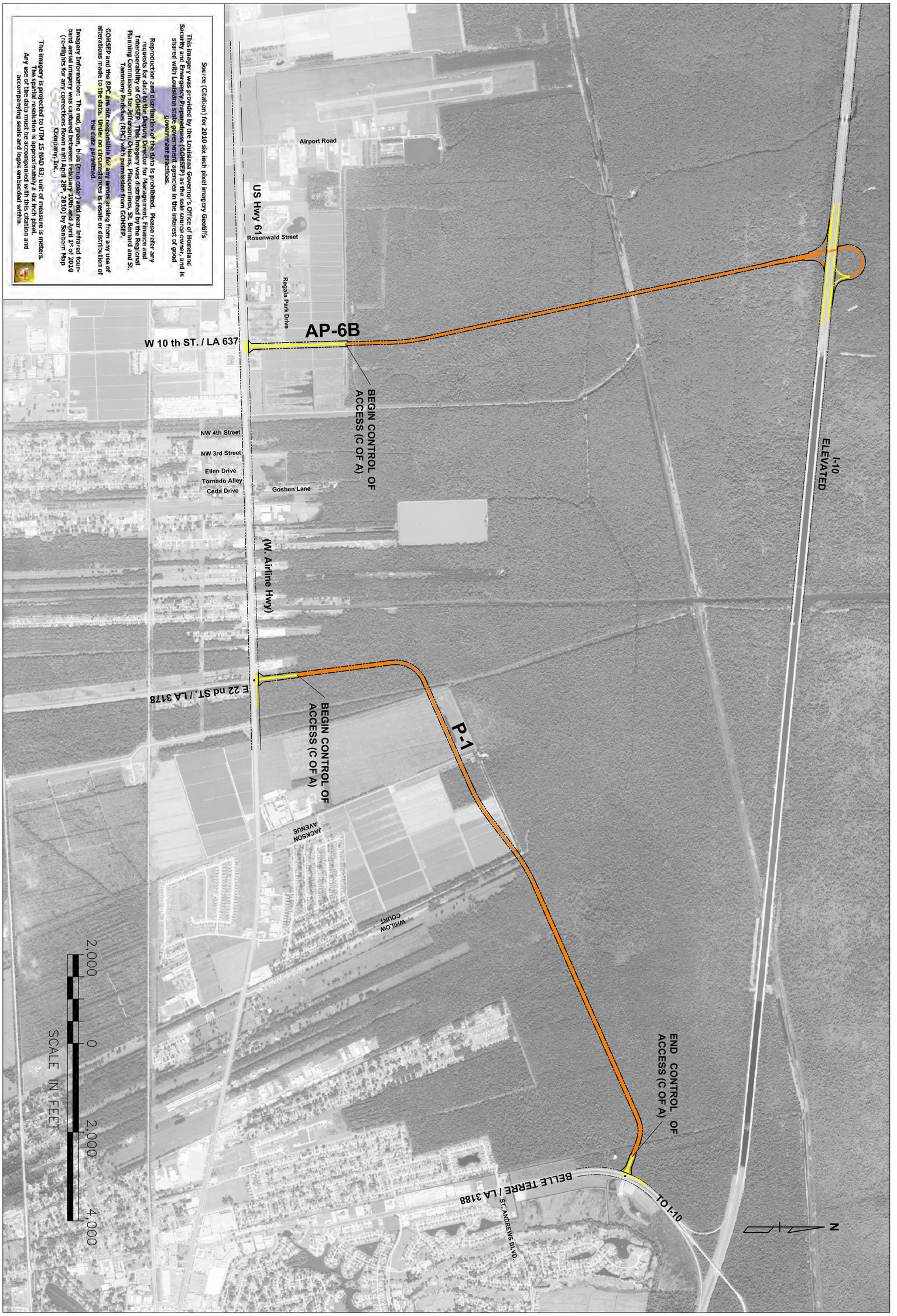
No Build Alternative

The No-Build Alternative provides a baseline to compare the other alternatives and includes improvements within the immediate project area that were already planned or programmed. For purposes of traffic and air quality analysis, all other planned and programmed transportation improvements within the *region* are also included in the No-Build Alternative, as these will have some effect on traffic demand and traffic volumes within the corridor.

Table II-8
Evaluation and Screening Matrix – Enhanced Access between US 61 in Reserve and I-10

ALTERNATIVES:

Screening Criteria related to Practicability:	**P-4**	**AP-2**	**AP-7**	**AP-6**	**EIS-4**	**EIS-5**	**AP-6B**	**EIS-3**	**P-1**
Improved Access / Travel Time Savings for regular traffic *(per trip; presented in mins./secs.):*	**Vehicular Traffic :** West: 0:00 East: 0:00	**Vehicular Traffic:** West: 1:21 East: 0:00	**Vehicular Traffic:** West: 1:49 East: 0:03	**Vehicular Traffic:** West: 1:55 East: 1:01	**Vehicular Traffic:** West: 0:0 East: 2:08	**Vehicular Traffic:** West: 0:00 East: 2:21	**Vehicular Traffic:** West: 2:18 East: 1:46	**Vehicular Traffic:** West: 1:42 East: 3:38	**Vehicular Traffic:** West: 0:00 East: 3:25
Year 2020 Total Daily Travel Time Savings *(minutes per day, gross):*	none	2,564	3,720	9,133	8,695	9,579	13,913	22,859	13,926
Year 2038 Total Daily Travel Time Savings *(minutes per day, gross):*	none	3,051	4,746	17,353	27,883	30,715	27,825	50,378	44,656
Improved Access / Travel Time Savings for emergency vehicle traffic *(per trip; presented in mins./secs.):*	**Emergency Access :** Center: 0:00	**Emergency Access :** Center: 8:46	**Emergency Access :** Center: 10:23	**Emergency Access :** Center: 10:29	**Emergency Access :** Center: 2:44	**Emergency Access :** Center: 4:07	**Emergency Access :** Center: 10:52	**Emergency Access :** Center: 10:16	**Emergency Access :** Center: 5:11
Screening Criteria related to Least Damaging:				**AP-6**			**AP-6B**	**EIS-3**	**P-1**
Wetland Impacts: Amount of Wetlands Impacted: *(in projected acres)*				**49.01 acres**			**48.92 acres**	**50.38 acres**	**30.71 acres**
Biological Resource Impacts: *(low, medium, high,)*				**high**			**high**	**medium**	**medium**
Water Quality Impacts: *(low medium, high)*				**low**			**low**	**medium**	**low**
Physical Resource Impacts *(low medium, high)*				**low**			**low**	**low**	**medium**
Other Impacts: Human Environment Impacts: *(low, medium, high)*				**medium**			**low**	**high**	**low**



LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

REGIONAL PLANNING COMMISSION — JEFFERSON • ORLEANS • PLAQUEMINES • ST. BERNARD • ST. TAMMANY

ASSOCIATES, INC.
ENGINEERS • ARCHITECTS • PLANNERS
PROGRAM & PROJECT MANAGERS

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ

FINAL BUILD ALTERNATIVES

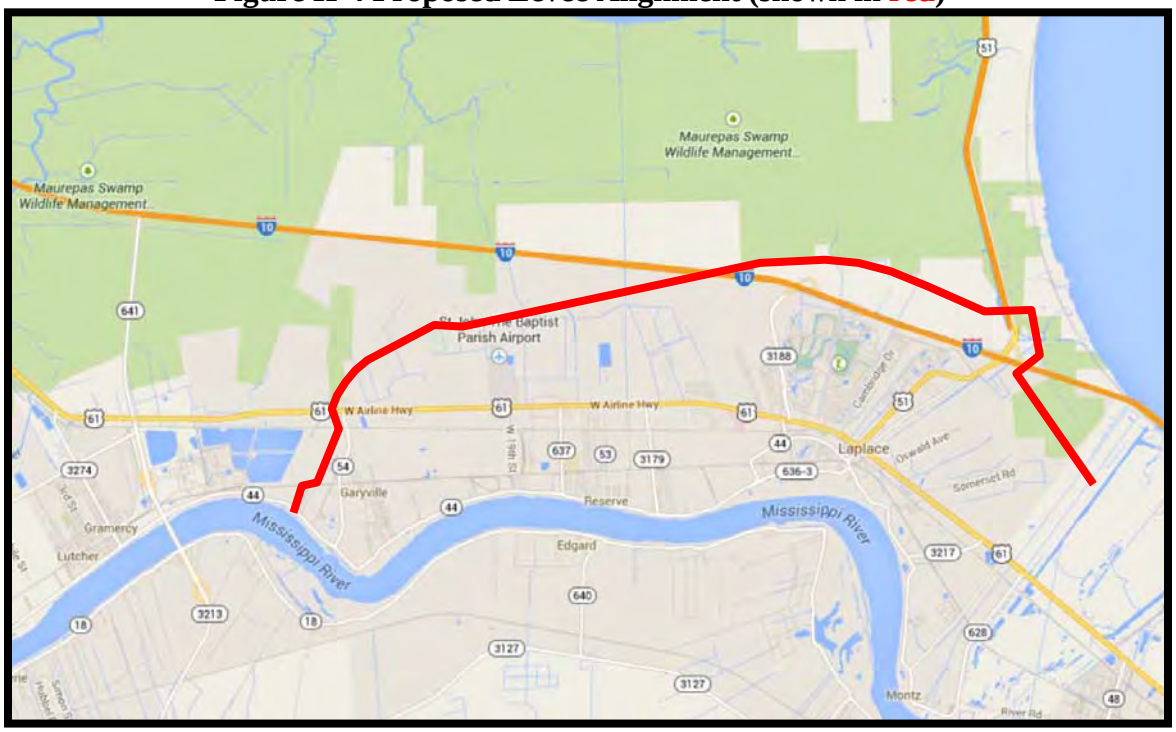
SHEET
II-3

The No Build Alternative includes the following roadway projects that are already planned, underway, or recently completed:

- **Port Connector Road (W. 10th Street) Improvements**
- **Optimization of timing and phasing plans for 10 signals along Airline Drive between Belle Pointe and Main Street**
- **Raising elevation of I-10 near LaPlace**
- **Raising elevation of I-10 ramps at LA 1088 (Belle Terre Interchange)**
- **US 61 Intersection Improvements at:**
  - **Marathon Avenue**
  - **LA 3188 (Belle Terre Blvd.) LA 3224 (Hemlock Street)**
  - **New US 51**
  - **Old US 51 (Main Street)**

The No Build Alternative also includes non-roadway projects that are planned, underway or recently completed. Most notable among these is the West Shore Lake Pontchartrain Levee project. The project is currently in the feasibility study phase and the US Army Corps of Engineers is the lead federal agency on the project. The Pontchartrain Levee District and St. John the Baptist Parish are evaluating the economic and environmental feasibility of constructing a Hurricane Protection Levee in St. John the Baptist Parish. During the development of the EIS document, the Pipeline Avoidance and Storage Capacity Alignment Alternative was selected, which places the levee just north of the gas pipeline crossing the project area. The planned levee would terminate on the west at the Mississippi River levee in Garyville. The location of the proposed levee is shown in **Figure II-4** below:

Figure II-4 Proposed Levee Alignment (shown in red)



Also included in the No Build Alternative are recent and planned improvements at the St. John Airport (during the course of the EIS, the runway was extended from 4,000 feet to 5,150 feet), and an ongoing Louisiana Office of Coastal Protect Mon and Restoration Mississippi River diversion project in the Garyville area designed to help restore the Maurepas Swamp.

Transportation System Management (TSM) Alternative

The TSM Alternative was designed to be a low-cost option for implementation that would address the EIS purpose and need. The purpose of the project in general -- to aid traffic in the Reserve area in accessing I-10 -- as well as the consideration of a project being "low-cost," leads to the TSM components focusing on improving traffic along US 61 or other routes which lead directly to I-10. As noted above, in the No Build Alternative there are several such projects recently completed, underway, or planned which would improve traffic. However, there remains four instances where the installation of acceleration lanes (primarily for heavy trucks leaving Port or other industrial facilities) would aid in traffic flow by allowing slower-accelerating trucks to get up to sufficient travel speed before entering US 61. These include the following locations:

1. **West 10th Street (signalized)** - northbound to eastbound right-turn acceleration lane
2. **Terre Haute Avenue (signalized)** - northbound to eastbound right-turn acceleration lane, and northbound to westbound left-turn acceleration lane
3. **Marathon Avenue (signalized)** - northbound to eastbound right-turn acceleration lane
4. **Marathon West Entry (unsignalized)** - northbound to eastbound right-turn acceleration lane

Conceptual engineering drawings of these four TSM Improvements are provided at the end of this chapter.

DEFINITION OF BUILD ALTERNATIVES

As mentioned in the earlier section on the *Evaluation and Screening of Build Alternatives*, as an initial step to better analyze the screening of the initial build alternatives, some initial conceptual engineering had already been done, including the establishment of design criteria and development of cross sections. As candidate alternatives, AP-6B and P-1 underwent further conceptual engineering as well as minor refinement, which is described below.

Design Criteria

The concept design of the roadway, ramps and bridges of the build alternatives meet LADOTD RC-3 (rural collector) criteria for roadway design.

Table II-9, on the following two pages, lists the design criteria.

Design Concept

AP-6B - This alternative extends north from US 61 to I-10. At US 61, its alignment would connect to Regala Park Drive, which is a northern extension of LA 637 (W. 10th Street). LA 637 extends south to the Port of South Louisiana and is planned for future roadway upgrades.

Beginning at the US 61 intersection with Regala Park Drive, the roadway would first include some improvements at the intersection, including installation of directional turning lanes. Regala Park Drive would be improved to meet LADOTD RC-3 Roadway Design Criteria, with the addition of 10 ft. shoulders, striping, clear zone and drainage. Where Regala Park Drive currently turns to the west, the new roadway would continue north and the east-west running portion of Regala Park Drive would intersect as a "T" intersection.

The new two-lane roadway would proceed north for approximately 1500 feet through agricultural fields. At that point, the two-lane roadway would enter the wetlands area and transition to an elevated highway on structure. The elevated highway would consist of two travel lanes of 12 feet each, divided by a concrete barrier rail in the center. Each travel lane would have a 10 foot outside shoulder and a two foot inside shoulder. The entire structure would be 52.5 feet wide, and the right-of way corridor would be approximately 100 feet wide (82.5 feet minimum).

As it proceeds toward I-10, the elevated highway structure heads slightly west of due north, so that the highway can connect to the at-grade portion of I-10 rather than the elevated portion of I-10. Approximately 1.22 miles north of the beginning of the elevated highway (or .8 miles south of I-10) the structure will pass over a gas pipeline.

At I-10, the roadway will intersect with the interstate via a fully directional interchange, very similar in form and function to the I-10 interchange at Belle Terre Boulevard, the nearest interchange to the east. Traffic from the new roadway heading west on I-10 and westbound traffic from I-10 heading south on the new roadway will utilize a new overpass over I-10, with the traffic from the new roadway heading west on I-10 utilizing a ¼ cloverleaf. Traffic from eastbound I-10 accessing the new roadway, and new roadway traffic heading east on I-10 will each use at-grade off-ramps and on-ramps on the south side of I-10.

Table II-9

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
Minimum Design Guidelines for Rural Collector Roads

State law requires that the state highway system conform to these guidelines.

Item No.	Item	Rural		
		RC-1	RC-2	RC-3
1	Average Daily Traffic [1]	Under 400	400 – 2000	Over 2000
2	Design Speed (mph)	40 – 60 [2]	50 – 60 [2]	60
3	Number of Lanes	2	2	2 – 4 [3]
4	Width of Travel Lanes (ft)	11	11 – 12 [4]	12
5	Width of Shoulders (ft)			
	(a) Inside on multilane facilities	N/A	N/A	4
	(b) Outside	2 [5]	4 – 5 [6]	8
6	Shoulder Type	Paved	Aggregate (2' min paved)	Aggregate (2' min paved) [7]
7	Width of Parking Lanes (ft)	N/A	N/A	N/A
8	Width of Median on multilane facilities (ft)			
	(a) Depressed	N/A	N/A	42 – 60
	(b) Raised	N/A	N/A	N/A
	(c) Two way left turn lane	N/A	N/A	N/A
9	Width of Sidewalk (minimum) (ft)			
	(a) When offset from curb	N/A	N/A	N/A
	(b) When adjacent to curb	N/A	N/A	N/A
10	Fore Slope (vertical – horizontal)	1:4	1:4	1:6
11	Back Slope (vertical – horizontal)	1:4 [8]	1:4	1:4
12	Pavement Cross Slope (%)	2.5	2.5	2.5
13	Min. Stopping Sight Distance (ft)	305 (40 mph) 425 (50 mph) 570 (60 mph)	425 (50 mph) 570 (60 mph)	570
14	Maximum Superelevation (%) [9]	10	10	10
15	Minimum Radius (ft) [10] (with full superelevation)	450 [11]	700 [12]	1,100
16	Maximum Grade (%)	7 (40 mph) 6 (50 mph) 5 (60 mph)	6 (50 mph) 5 (60 mph)	5
17	Minimum Vertical Clearance (ft) [13]	15	15	15
18	Minimum Clear Zone (ft) (from edge of through travel lane)	10, 14, 24 [14]	26 (50 mph) 32 (60 mph)	30
19	Bridge Design Live Load [15]	AASHTO	AASHTO	AASHTO
20	Minimum Width of Bridges (face to face of bridge rail at gutter line) (ft)	30	Roadway width	Roadway width

Approved _____ Chief Engineer

12-4-09 Date

Table II-9 (continued)

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Footnotes for Minimum Design Guidelines for Rural Collector Roads

1- Current traffic may be used to determine the appropriate classification.
2- The design speed may not be less than the current posted speed of the overall route.
3- For rolling terrain, limited passing sight distance and high percentage of trucks, further analysis should be made to determine if additional lanes are required when ADT is above 7,000.
4- For design speeds greater than 50 mph and ADT greater than 1,500 use 12-foot lanes.
5- Where bicycle activity is observed, a 4-foot shoulder should be provided.
6- For ADT greater than 1,500 use 6 foot shoulders.
7- For ADT of 5,000 or greater, a minimum of 4 foot must be paved.
8- 1:3 back slopes are allowed where right-of-way restrictions dictate.
9- In Districts 04 and 05, where ice is more frequent, superelevation should not exceed 8 percent from the e_{max} = 10% table.
10- It may be necessary to increase the radius of the curve and/or increase the shoulder width (maximum of 12 feet) to provide adequate stopping sight distance on structure.
11- Radius based on 40 mph. Radii for 50 mph and 60 mph are shown under the RC-2 and RC-3 classifications respectively.
12- Radius based on 50 mph. The radius for 60 mph is shown under the RC-3 classification.
13- Where the roadway dips to pass under a structure, a higher vertical clearance may be necessary. An additional 6 inches should be added for additional future surfacing.
14- The lower value is based on a 40 mph design speed, the middle value for 50 mph and the upper value for 60 mph.
15- LRFD for bridge design.

General Note:

DOTD pavement preservation minimum design guidelines or 3R minimum design guidelines (separate sheets) shall be applicable to those projects for which the primary purpose is to improve the riding surface.

P-1 - This alternative extends north from US 61 to LA 3188 (Belle Terre Boulevard) just south of that roadway's interchange with I-10. The alternative begins as an extension of LA 3179 (E. 22nd Street) at US 61. At the intersection of those two roadways, the alternative would first include some improvements at the intersection, including re-orientation and re-striping of the center lane on LA 3179 south of US 61 (from turn lane to a through lane) as well as installation of a traffic signal and directional turning lanes on US 61.

North of US 61, the new roadway would be an at-grade roadway for a short distance (less than ¼ of a mile), and then would transition to an elevated highway on structure over wetlands. The elevated highway dimensions and specifications would be the same as those for AP-6B. And similar to AP-6B, it is assumed that in order to minimize impacts, end-on bridges construction would be utilized in wetland areas.

The elevated roadway proceeds north-northwest for approximately ¾ mile north of US 61 before curving to the northeast. Originally, the route was to pass over the extreme northern edge of non-wetland agricultural areas as it proceeded northeast, but during field research it was determined that the original route was located on a combination of a back levee and a drainage canal. As such, the alignment was refined in June 2013 so that it curved to the east earlier, and passed through the agricultural fields several hundred yards south of the canal and levee. Before returning to the wetland areas, the alternative shifts back to its original alignment near the northern edge of the fields. It should be noted that while this section of the roadway is not passing through undeveloped wetland areas, it remains on an elevated structure.

Just prior to its intersection with Belle Terre Boulevard, the elevated roadway turns more to the east and transitions back to an at-grade roadway to intersect with Belle Terre. The location of the Belle Terre intersection is the existing stub-out for the planned Woodland Drive extension, about ½ mile from the I-10 interchange.

The new intersection with Belle Terre would require some modification to the existing stub-out under two possible options. One option would be to convert the intersection to a signalized intersection, with corresponding turn lanes for each approach. The second option is installation of a free-flow roundabout intersection.

Bridge Structures

Type of Bridge Construction Used Over Wetlands

For most of the project length (on the main connector road structure between US 61 and I-10, there are several different types of construction that can be used. In other areas, such as the I-10 interchange under Alternative AP-6B and the at-grade connections under both alternatives, only standard construction methods can be used. An analysis on the method of bridge construction to be used on the main connector road over the wetland areas was completed as part of the design concept for this environmental analysis. The

analysis primarily examined the balance between cost to construct bridge structure and the estimated amount of wetlands that would be impacted. In general, the length of the structure would be the same for any method of construction for either of the two alternatives. Thus, the width or cross section being impacted under each method is the determining factor for the amount of wetland impacts (the wider the cross-section being disturbed, the more wetlands are being impacted). However, there is a trend that construction costs for the bridge are usually lower with those methods of construction that impact more wetlands.

Four different methods of construction were examined:

- *End-on construction*, which impacts the least amount of wetlands. End-on involves using the bridge structure itself as a base for construction cranes and pile drivers. It requires the least amount of cross-section to be impacted during construction. End-on construction, however, also necessitates shorter span lengths (a maximum of 40' long girders) and thus more numerous pile supports and pile bents than traditional construction.
- *Conventional construction*, which would entail a temporary construction road being built alongside the new bridge for access of construction cranes and pile drivers. As this would require a wider cross-section to be impacted during construction than under end-on construction, this method would initially impact more wetlands than end-on construction, but would include the restoration of the wetland areas in the footprint of the construction road once bridge construction is completed. Typically, all construction material is removed, and wetland tree seedlings such a cypress are planted at a rate of 50 per acre.
- *Use of a falsework gantry*, which rests on the surrounding ground but is elevated to a level higher than the bridge structure and can be rolled forward during construction. This would require a wider cross-section to be impacted during construction than under end-on construction, but slightly less (5 ft.) than would be impacted than under conventional construction. This method would also would include the restoration of the wetland areas in the footprint of construction once the bridge is completed.
- *Use of a temporary bridge structure along one side of the new bridge*. This method would require a wider cross-section to be impacted during construction than under end-on construction, but with noticeably less cross-section impacted than would be under conventional construction or falsework gantry (17' temporary cross section vs. 45' or 40' temporary cross sections). This method would also would include the restoration of the wetland areas in the footprint of construction once the bridge is completed. .

Conventional construction, use of a falsework gantry or a temporary bridge structure would enable longer girders spans than the 40' maximum in end-on construction: 50’ Type II girders', 80' Type III girders, or 100' Type IV girders. Longer spans lessen the number of pile support bents needed, and also provides a smoother ride.

Costs were estimated for each of these, and they are compared on the following page (along with the cross-section affected and estimated acreage of wetlands impacted, both for permanent impacts and temporary impacts under each alternative) in **Table II-10**:

Table II-10
Reserve to I-10 Connector Bridge Cost Comparison

Type of Construction:	Cost /Linear ft *(includes wetland tree replanting in those alternatives with temporary construction areas):*	Cross-section width	Estimated Wetland Acres Impacted for Main Elevated Connector *(does not include at grade sections or interchange area for AP-6B)*	
			AP-6B	P-1
End on Construction- 40' girder	$5,064	82.5'	20.9 permanent	31.1 permanent
Falsework Gantry) 50' Type II girders	$6,318	122.5' (82.5' permanent, 40' temporary)	20.9 permanent, 10.2 temporary	31.1 permanent, 15.1 temporary
Conventional (temp. construction road) 50' Type II girders	$3,849	127.5' (82.5' permanent, 45' temporary)	20.9 permanent, 11.4 temporary	31.1 permanent, 17.0 temporary
Falsework Gantry 80' Type III girders	$6,412	122.5' (82.5' permanent, 40' temporary)	20.9 permanent, 10.2 temporary	31.1 permanent, 15.1 temporary
Conventional (temp. construction road) 80' Type III girders	$3,942	127.5' (82.5' permanent, 45' temporary)	20.9 permanent, 11.4 temporary	31.1 permanent, 17.0 temporary
Falsework Gantry 100' Type IV girders	$6,492	122.5' (82.5' permanent, 40' temporary)	20.9 permanent, 10.2 temporary	31.1 permanent, 15.1 temporary
Conventional (temp. construction road) 100' Type IV girders	$4,021	127.5' (82.5' permanent, 45' temporary)	20.9 permanent, 11.4 temporary	31.1 permanent, 17.0 temporary
Temporary Bridge – 80' Type III girders	$5,070	99.5' (82.5' permanent, 17' temporary)	20.9 permanent, 4.3 temporary	31.1 permanent, 6.4 temporary

- The falsework gantry method was eliminated as it has the highest cost, even higher than end-on construction (which has the least impact to wetland areas). Falsework gantry construction also has approximately 50% more wetlands impacted than under end-on construction (albeit on a temporary basis).

- Although conventional construction methods would result in a lowest per-unit cost than the other methods, it has the longest cross-section width and will disturb the most amount of wetlands – more than 50% more wetlands are impacted than with end-on construction (albeit on a temporary basis), and as such conventional construction was eliminated.

- Between the end-on construction method and the temporary bridge method, there is very little difference in cost, and a 17’ difference in cross section affected. It results in roughly 20% more wetland impacts (albeit on a temporary basis). As the wetland impacts are one of the key considerations of this project, it was determined that for

purposes of impact analysis as well as cost estimation, end-on construction would be used.

It should be re-iterated that end-on construction cannot be used in certain areas, such as the I-10 interchange under Alternative AP-6B and for the at-grade connections under both alternatives.

Bridge Description

The segments of AP-6B and P-1 elevated over wetland areas will be supported by 24" square pre-cast, pre-stressed concrete piles, supporting cast in place 3' foot deep concrete pile caps. Girders will be Type II pre-cast, pre-stressed concrete girders (40' spans) covered by an 8" thick cast in place concrete slab. Following the flooding events of Hurricane Isaac in 2012, elevations have been adjusted accordingly to elevation 16.0.

The USACE selected plan for a St. John the Baptist levee envisions earthen levees varying from elevation 7.0 to elevation 13.5. The segment of AP-6B crossing the levee may need to be raised during design to clear the levee. The spans over the levee will have to be increased longer than the typical 40' spans. Span lengths and pile locations for the bridge will be coordinated with the designs of the flood protection levee.

On Alternative AP-6B, the elevated approach ramps for the I-10 interchange will be similar in construction to the alternative mainline structure, except for the use of Type III girders. The two-lane mainline interchange ramp over I-10, however, will be built on three (3), 3.5' diameter cast in place columns supported by cast in place concrete footings, each supported by 16" PPC piles. The columns will support a cast-in-place cap, which in turn will support Type IV pre-cast pre-stressed concrete girders. Minimum Interstate Design Vertical Clearance will be applied/considered for Alternative AP-6B where it crosses I-10.

Drainage

Along the elevated structures through the wetlands areas, cross-drainage flow should not be an issue.

Along at-grade portions, pipes and/or box culverts have been estimated where ditch crossings were observed in the field and/or noted on quad maps, or where determined to be necessary to allow cross-drainage.

During preliminary plan preparation, a drainage study and drainage map will be prepared.

Utilities

General

The utility disposition table in the Appendix lists the public and private utilities identified within the roadway alternative alignments through discussions with the individual utilities. Private utilities requiring coordination during design for potential relocation include Entergy, AT&T, Cox Communications, and Atmos Entergy. Public utilities include sewer and water. The estimated cost to relocate the utilities potentially to be paid by this project are listed in the utility disposition table are included in the construction cost estimate. Order of magnitude relocation costs were requested from the individual utilities if to be paid for by this project. If the utility did not provide these costs, then costs were estimated.

TSM Alternative

Public Utilities:

No public utility conflicts were identified.

Private Utilities:

No private utility conflicts were identified.

Alternative AP-6B

Public Utilities:

The only public utility conflict identified at this time is a 12" water line at US 61. The relocation costs are included in the cost estimate.

Private Utilities:

Electric, telephone and cable utility conflicts were identified. As these are within the existing road right-of-way, the relocation costs will be borne by the respective utility.

Alternative P-1

Public Utilities:

The only public utility conflict identified at this time is a 12" water line at US 61 and a 12' water line at Belle Terre Blvd. The relocation costs are included in the cost estimate.

Private Utilities:

Electric, telephone and cable utility conflicts were identified. As these are within the existing road right-of-way, the relocation costs will be borne by the respective utility.

CONCEPTUAL PROJECT COST

CONSTRUCTION COST

Construction quantities for the alternatives were derived from the typical sections and the plan layouts included at the end of this chapter. Unit prices are based on Louisiana Department of Transportation and Development (LADOTD) 4th quarter, 2012 unit prices. Construction costs were divided into the following basic groups: At-Grade Roadway (including earthwork, base course, geotextile fabric, pavement, striping, raised pavement markers, drainage and fencing), Clearing and Grubbing, Traffic Signals, Bridge Structures, Mobilization, and Right-of-Way Acquisition. Some aspects of construction type and details used in cost estimation (bridge structures, drainage) were provided earlier within this chapter; some additional notes on some of the other categories are provided below.

At-Grade Roadway

The at-grade roadway cost estimate includes construction of new roadway with embankment, fill, base course, pavement, and striping. The area of proposed construction is mostly flat. Asphalt pavement was assumed for estimating purposes along the roadway corridor.

Traffic Signals

The conceptual cost estimate includes installation of new traffic signals at intersection locations where projected traffic volumes warrant the installation of new signals in the build year. These include the intersection of US 61 and W. 10th Street (LA 637) under Alternative AP-6b, the intersection of US 61 and the new roadway at E. 22nd Street and the intersection of the new roadway with Belle Terre Boulevard (LA 3188) under Alternative P-1, and the intersection of US 61 and Terre Haute Avenue under the TSM Alternative. A $75,000 cost per signal was used.

Mobilization

A conceptual cost for mobilization was estimated and included as 10% of the roadway and bridge construction costs and utility relocations.

Right-of-Way Acquisition

Private property will need to be acquired to construct the either of the two build alternatives. The TSM Alternative will require no property acquisition, as the improvements will be constructed within existing right-of-way.

Two types of property will be purchased for the build alternatives each with very different costs: *wetland areas* and *developable areas* along US 61 (Airline Highway) and LA 3188 (Belle Terre Blvd.). The methodology employed in the determination of estimated costs for these types of properties involved internet research of both recent sales and property for sale in the project area. A recent sale example for wetland areas was the recent acquisition of 29,630 acres for the Maurepas Swamp Wildlife Management area, at a price of $6.5 million, which translates to a cost of $219.37 per acre. For purposes of this cost estimate, that cost was rounded to $220/acre. For the commercially-zoned property along major thoroughfares such as Airline Highway and Belle Terre Boulevard, research on comparable asking prices of "for sale" properties located along the corridors in the project study area was performed and it was found that vacant land in the area was selling for an average price of about $183,400 per acre. For purposes of the cost estimate, this type of property was rounded up to a cost of $185,000 per acre.

Contingencies

A 25% construction cost contingency was included for this concept-level study.

OTHER PROJECT COSTS

Engineering Design Costs

Prior to construction, the project will need to be fully engineered, not only including actual design, but also including testing, surveying, and geotechnical investigation. Using a baseline estimate of 15% of construction cost, engineering design costs would be range between $12.1 million to roughly $175,000, depending on the alternative.

Utilities

Utility costs include costs for the relocation of existing utilities that have been identified by the utility companies as being a cost to the project. Private utilities are considered to be relocated at the utility provider's cost unless the utility has stated they have a basis for the project paying for the relocation. The utility will have to provide the basis for the project paying the relocation costs. See the Appendix for those utilities identified with by the utility companies along the proposed alignments.

Environmental Mitigation

The last project cost would be cost of mitigation of any unavoidable impacts. One possible cost of mitigation has already been identified, that of wetland impacts: Mitigation of unavoidable wetland impacts on similar projects in the past has been achieved through a monetary contribution, as determined by the regulatory agencies, to the Louisiana Nature Conservancy that maintains several wetland mitigation areas in Louisiana. Three (3) current wetland mitigation areas (or wetland banks) were contacted, and mitigation purchases at these banks ranged between $35,000 to $50,000 per acre. Of course prior to the project progressing to the construction phase, coordination with the US Army Corps of Engineers will need to be undertaken, and depending on their findings and determination under the Modified Charleston Method, impacted wetlands may need to be replaced at a 1-1 ratio, a 1-2 ratio, a 1-3 ratio, or an even higher ratio.

For purposes of this study, a basic replacement ratio of 1:1 and a conservative mitigation cost estimate of $50,000 per wetland acre impacted is included.

SUMMARY

Table II-11 on the following page presents detailed conceptual project cost estimates for the TSM Alternative, Alternative AP-6B, and Alternative P-1. The total cost estimate for constructing the TSM Alternative is **$1,342,611** the cost for Alternative AP-6B is **$95,005,187**, and the cost for Alternative P-1 is **$92,463,642**. As of the date of this document, there is no current funding source identified for designing or constructing this project.

Table II-11
Conceptual Project Cost Estimate

RIGHT-OF-WAY AND CONSTRUCTION						
	AP-6B	**P-1**	**TSM**	**TSM**	**TSM**	**TSM**
			Marathon West Entry	Marathon Ave.	Terre Haute Ave.	West 10th St.
Roadway (*earthwork, base course, geotextile fabric, pavement, striping, raised pavement markers, drainage*)	$4,684,200	$621,500	$172,000	$206,400	$196,100	$206,400
Clearing and grubbing	$2,609,100	$2,957,300	$0	$0	$0	$0
Traffic Signals	$75,000	$150,000	$0	$0	$75,000	$0
Bridge Structures	$50,394,400	$52,833,300	$0	$0	$0	$0
Mobilization (10%)	$5,768,770	$5,641,210	$17,200	$20,640	$19,610	$20,640
Right-of-Way	$1,269,356	$818,354	$0	$0	$0	$0
Subtotal	$64,800,826	$63,021,664	$189,200	$227,040	$290,710	$227,040
Contingencies (25%)	$16,200,207	$15,755,416	$47,300	$56,760	$72,678	$56,760
Subtotal, Construction	$81,001,033	$78,777,080	$236,500	$283,800	$363,388	$283,800
OTHER PROJECT COSTS						
Engineering Cost (15%)	$12,150,155	$11,816,562	$35,475	$42,570	$54,508	$42,570
Utility Relocations	$22,500	$100,000	$0	$0	$0	$0
Wetland Mitigation	$1,831,500	$1,770,000				
Subtotal, Other Project Costs:	$14,004,155	$13,686,562	$35,475	$42,570	$54,508	$42,570
TOTAL PROJECT COST	**$95,005,187**	**$92,463,642**	**$271,975**	**$326,370**	**$417,896**	**$326,370**
			Total, all TSM improvements:			**$1,342,611**

PROJECTED OPERATIONS AND MAINTENANCE COSTS

The annual total operation and maintenance costs for the two build alternatives include the annual maintenance cost of the roadway and bridge for re-striping the roadway and bridge every five years, coldmill and overlay of the asphalt pavement every ten years, bi-annual bridge inspections and periodic cleaning of bridge joints. The costs of routine grass cutting on the right-of-way and sweeping the roadway and bridge and cleaning joints on the bridge are considered negligible.

Typical maintenance costs were obtained through previous discussion with LADOTD Operations and Maintenance Department staff. Access to the elevated structures on either alignment is limited and will require a "snooper" along with an operator and a two-man inspection team for 1-2 days per structure. With the limited structure width, law enforcement should also be utilized for traffic control.

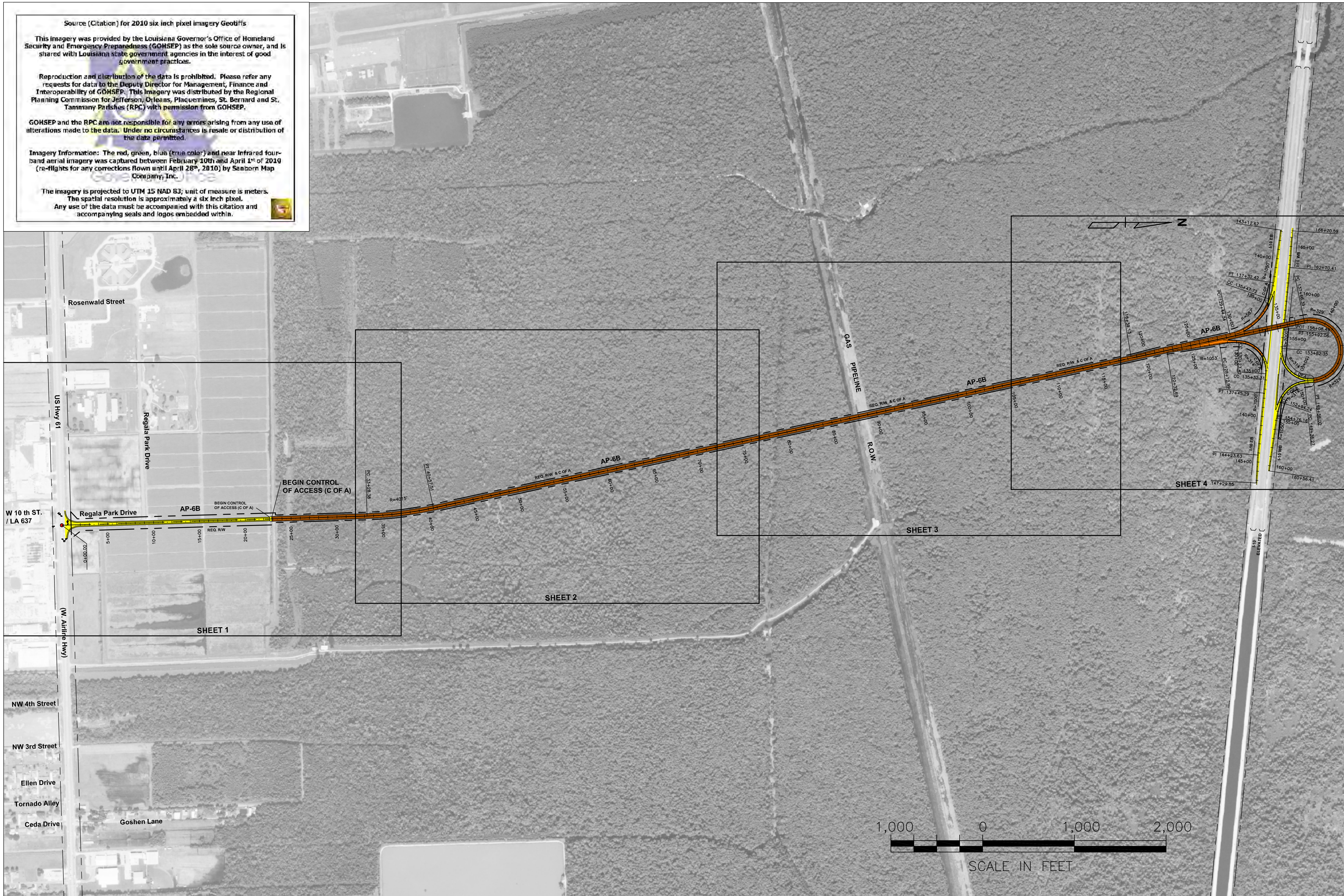
Table II-12 below gives a breakdown of the operations and maintenance costs:

Table II-12
Build Alternatives
Annual Operation and Maintenance Costs

O&M Category	Alternative AP-6B	Alternative P-1
Re-Striping	$9,700	$7,200
Roadway Coldmill and Overlay	$151,200	$29,300
Bridge Inspection	$12,500	$12,900
TOTAL:	$173,400	$48,400

ENGINEERING DRAWINGS

Plan view layouts, typical sections, and a u-turn detail for the TSM Alternative, Alternative AP-6B, and Alternative P-1 are presented beginning on the following page.



ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10

STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT

ST. JOHN THE BAPTIST PARISH

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PLAN LAYOUT - ALTERNATE AP-6B

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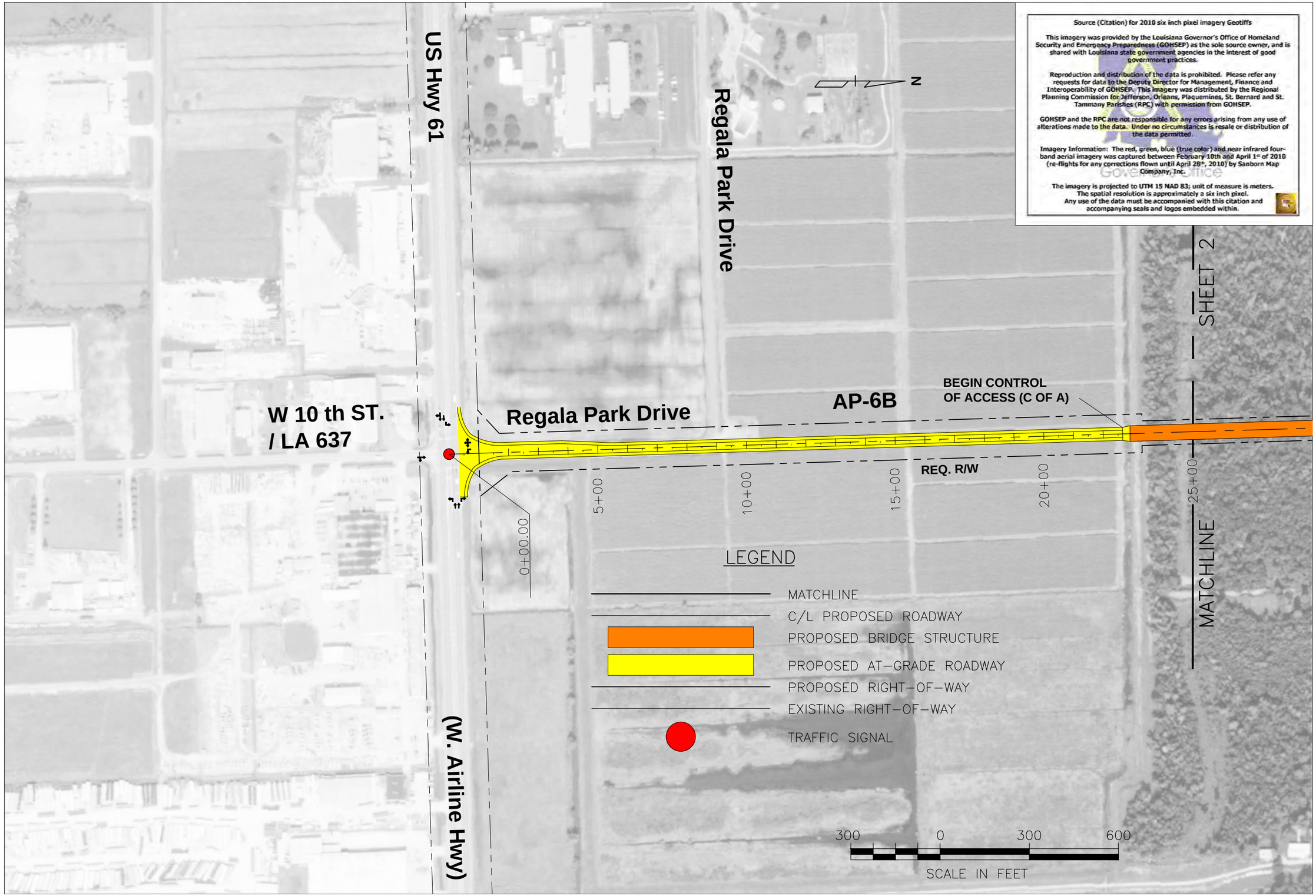

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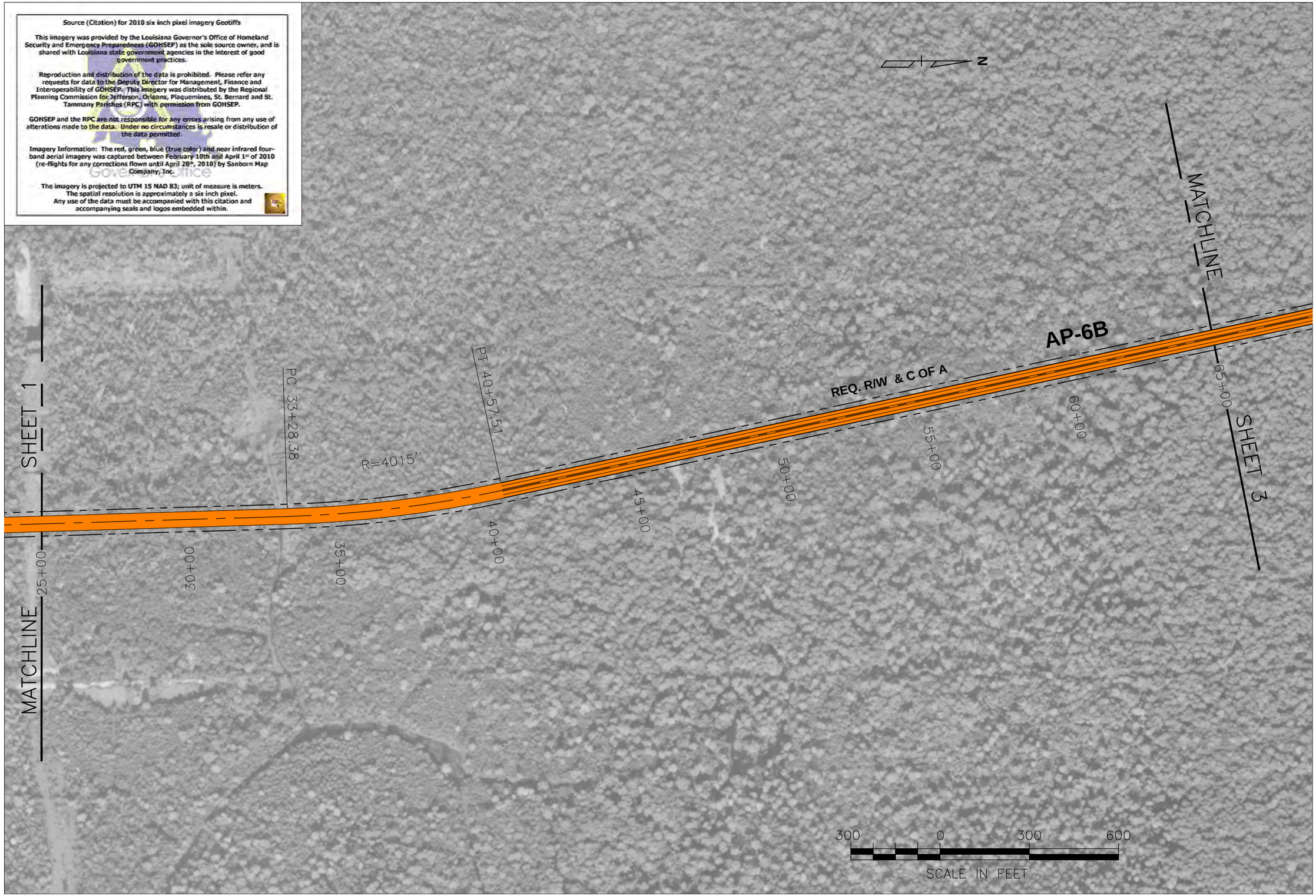

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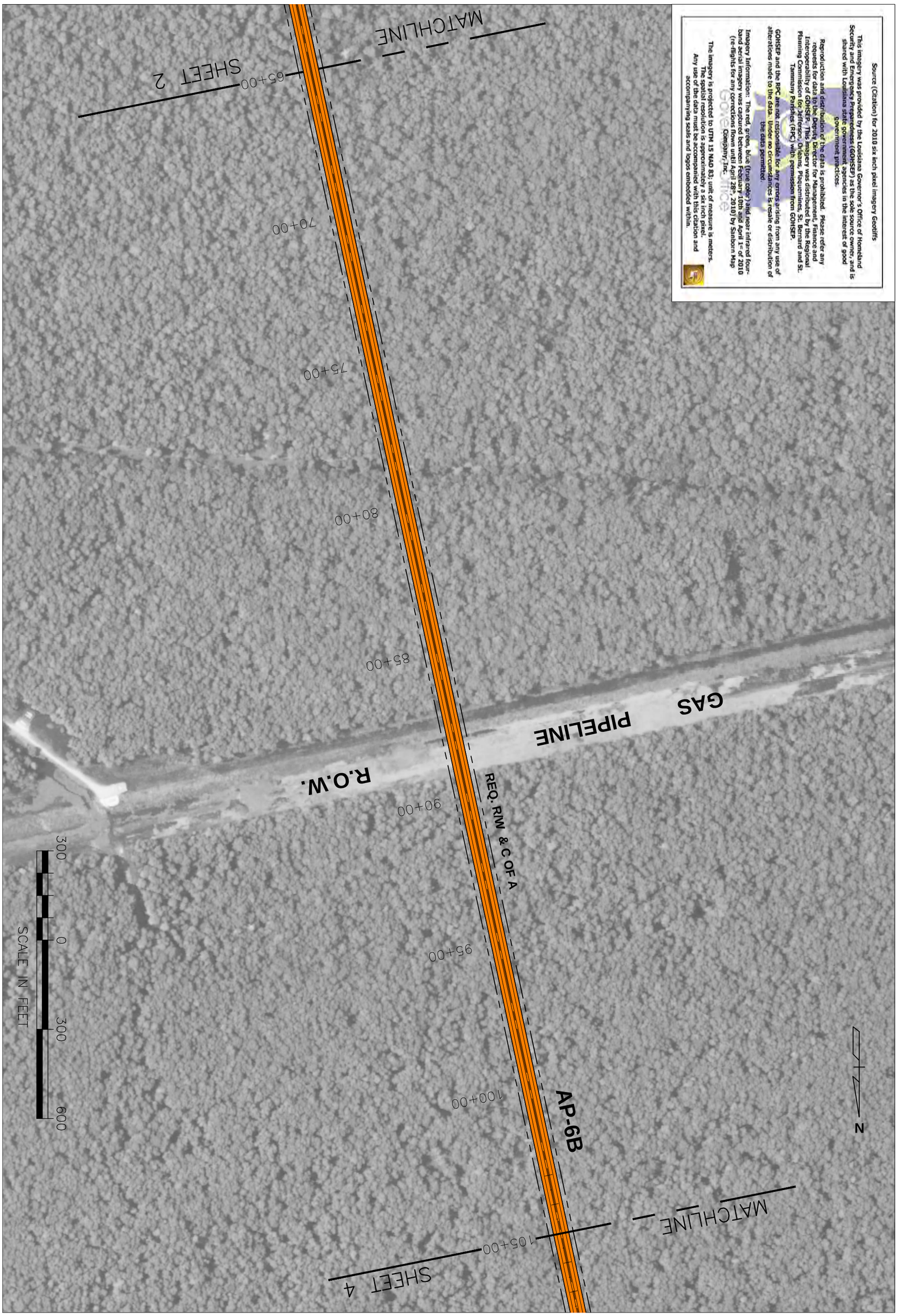

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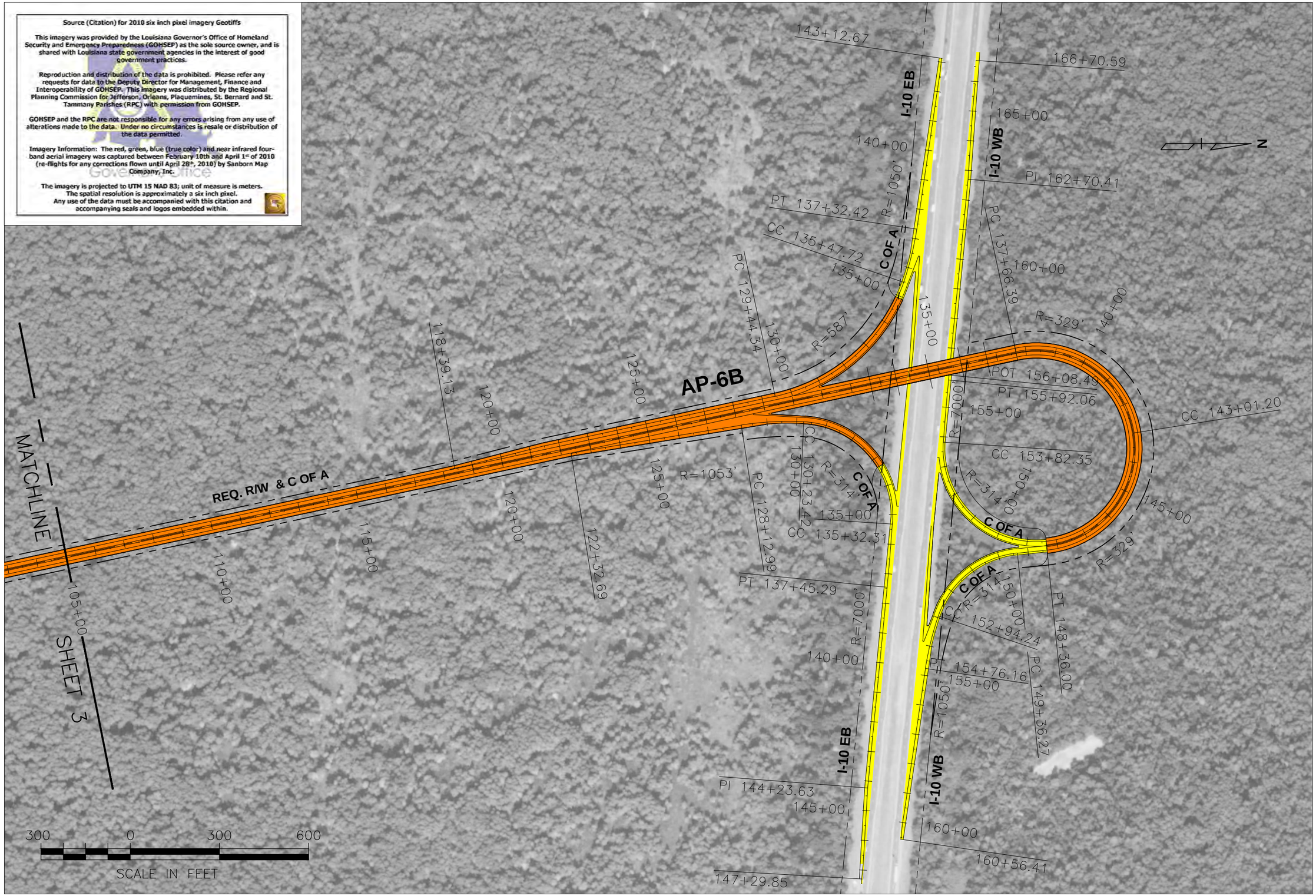

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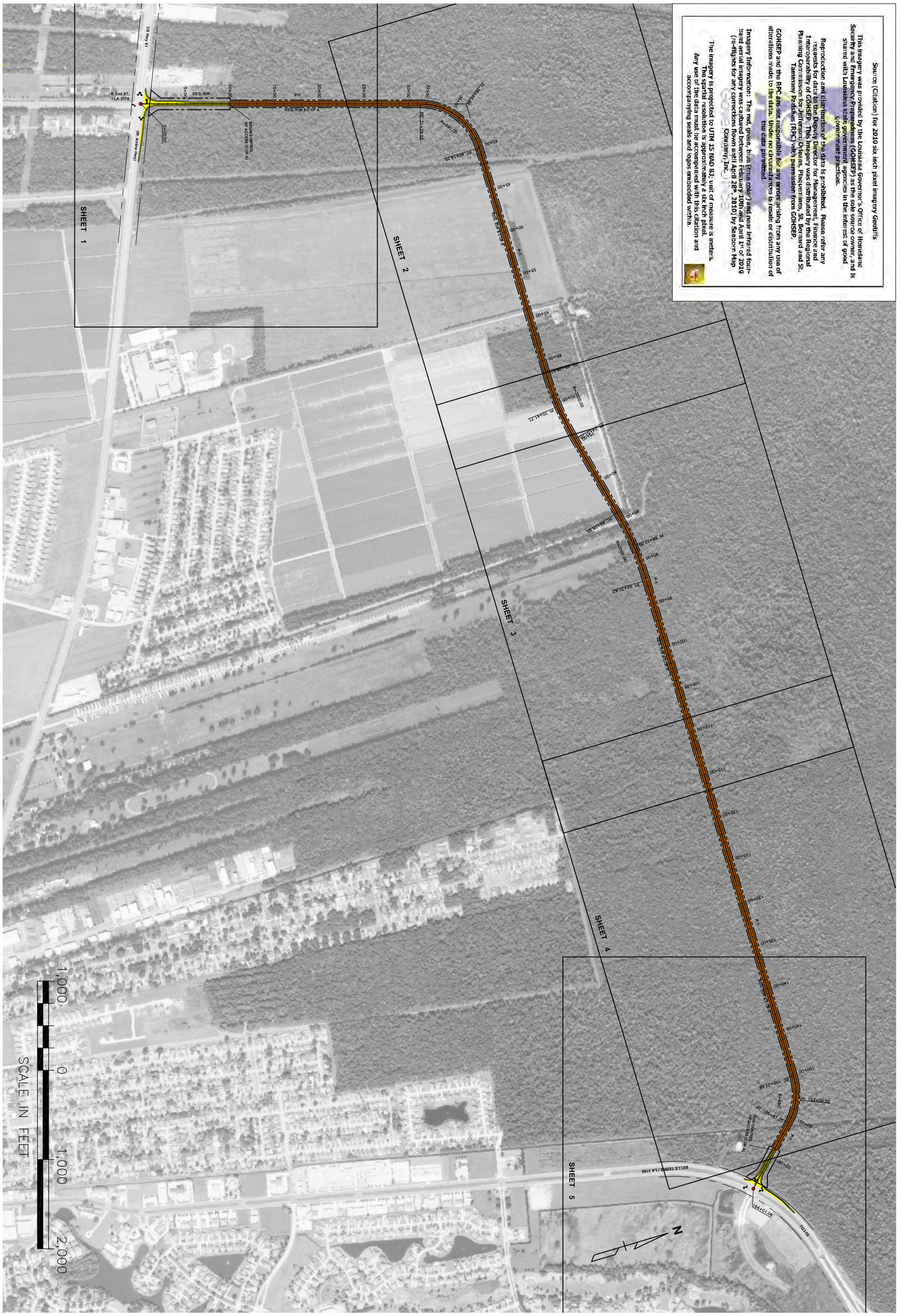

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P-1

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REQ. R/W

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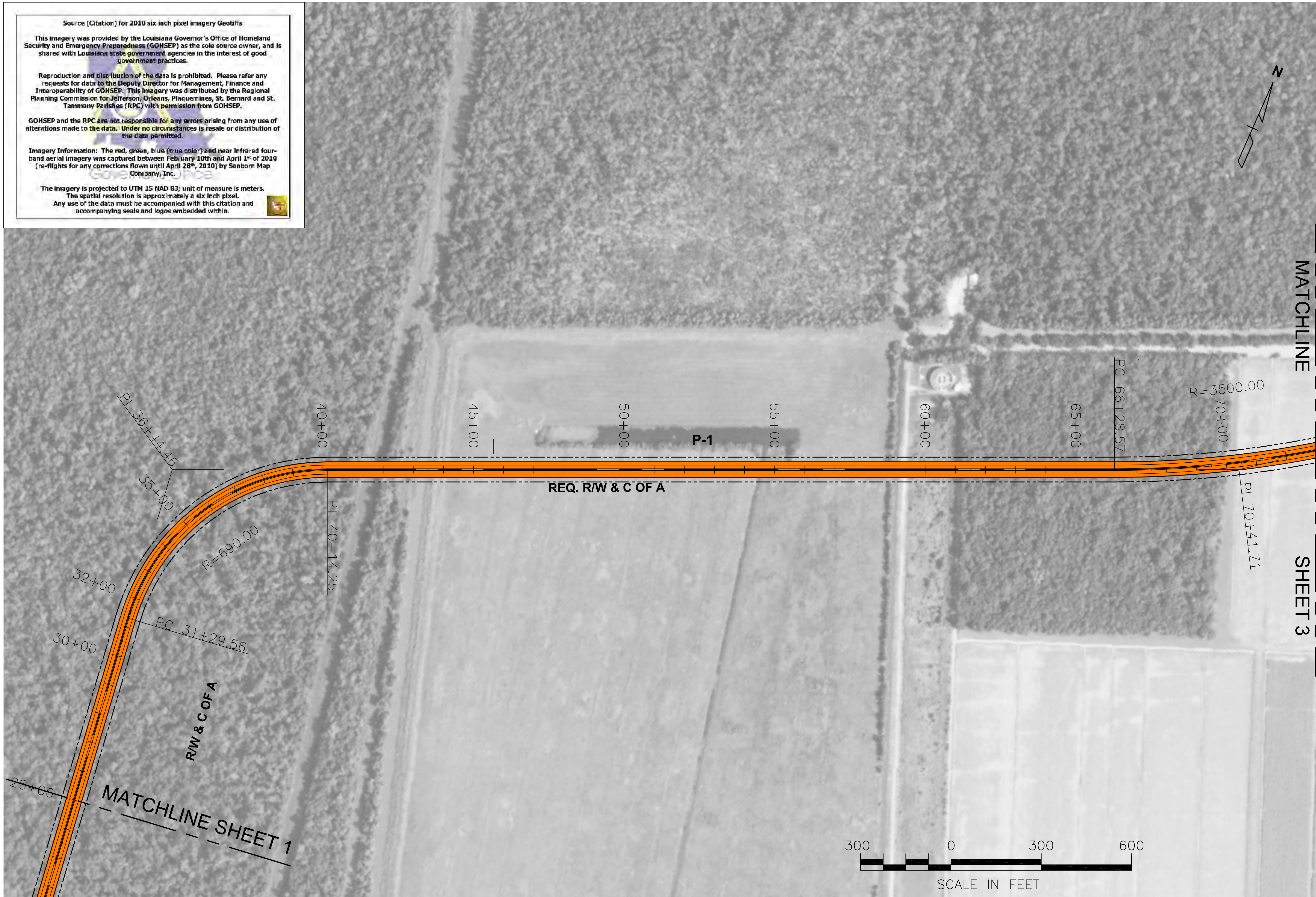

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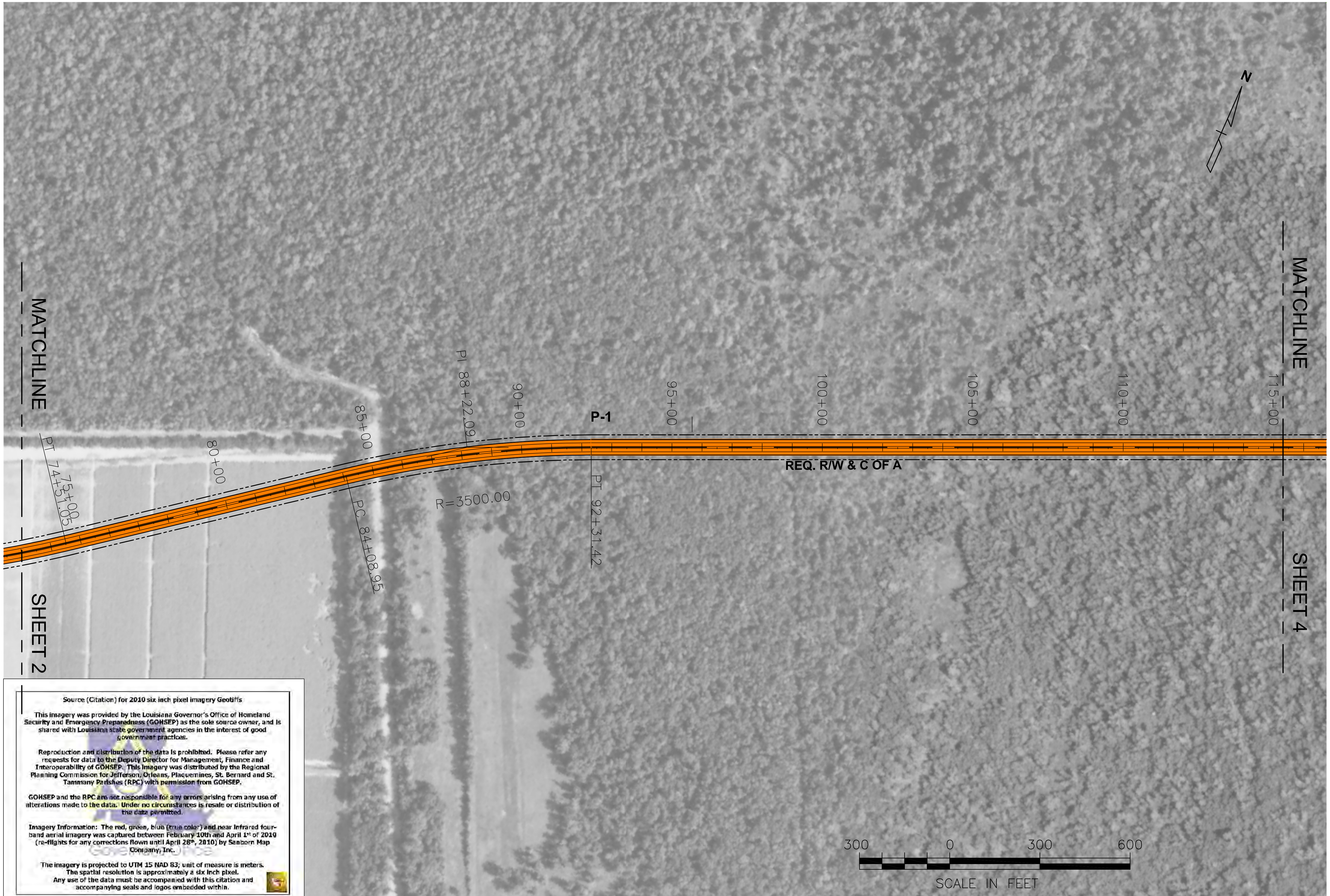

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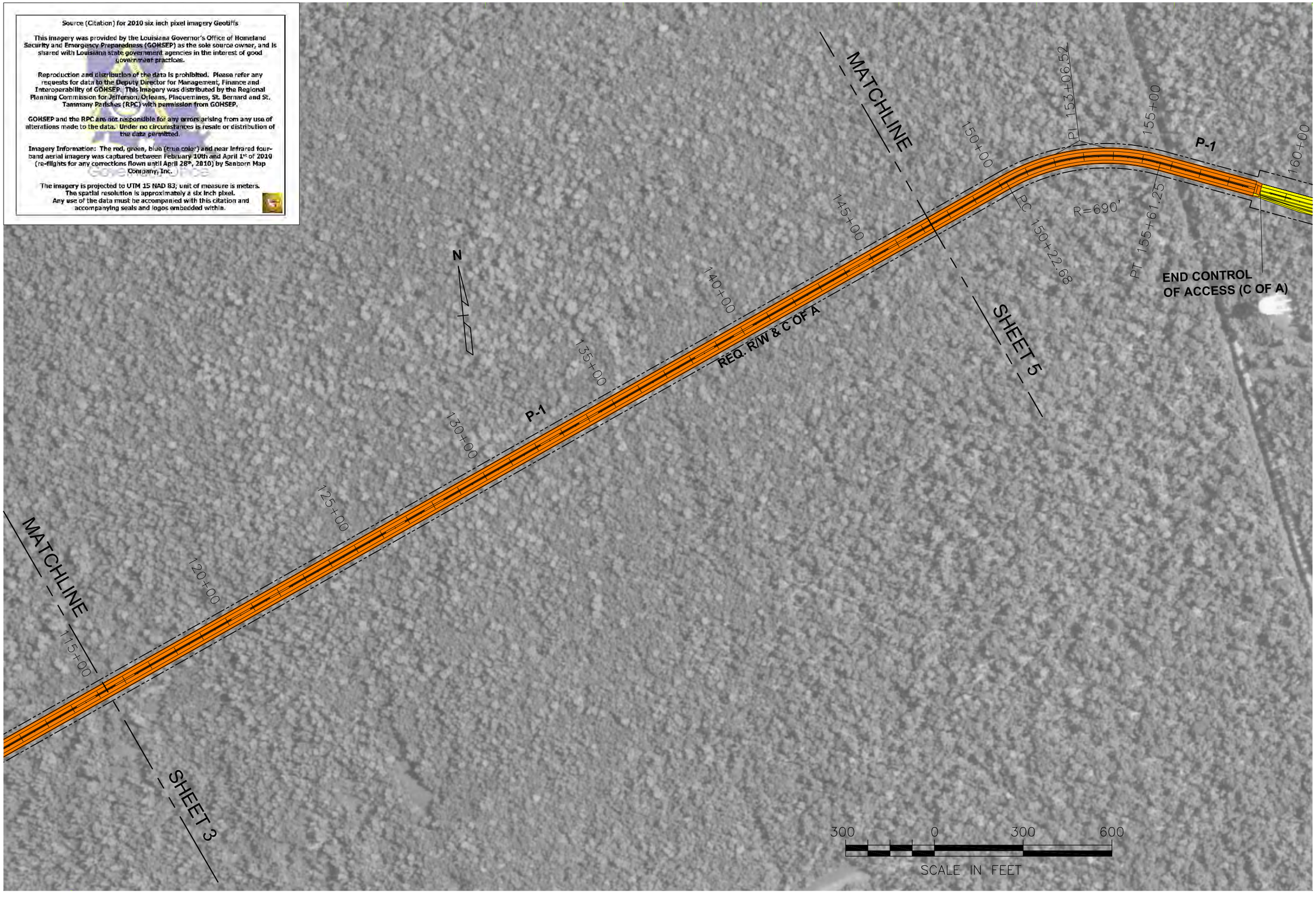

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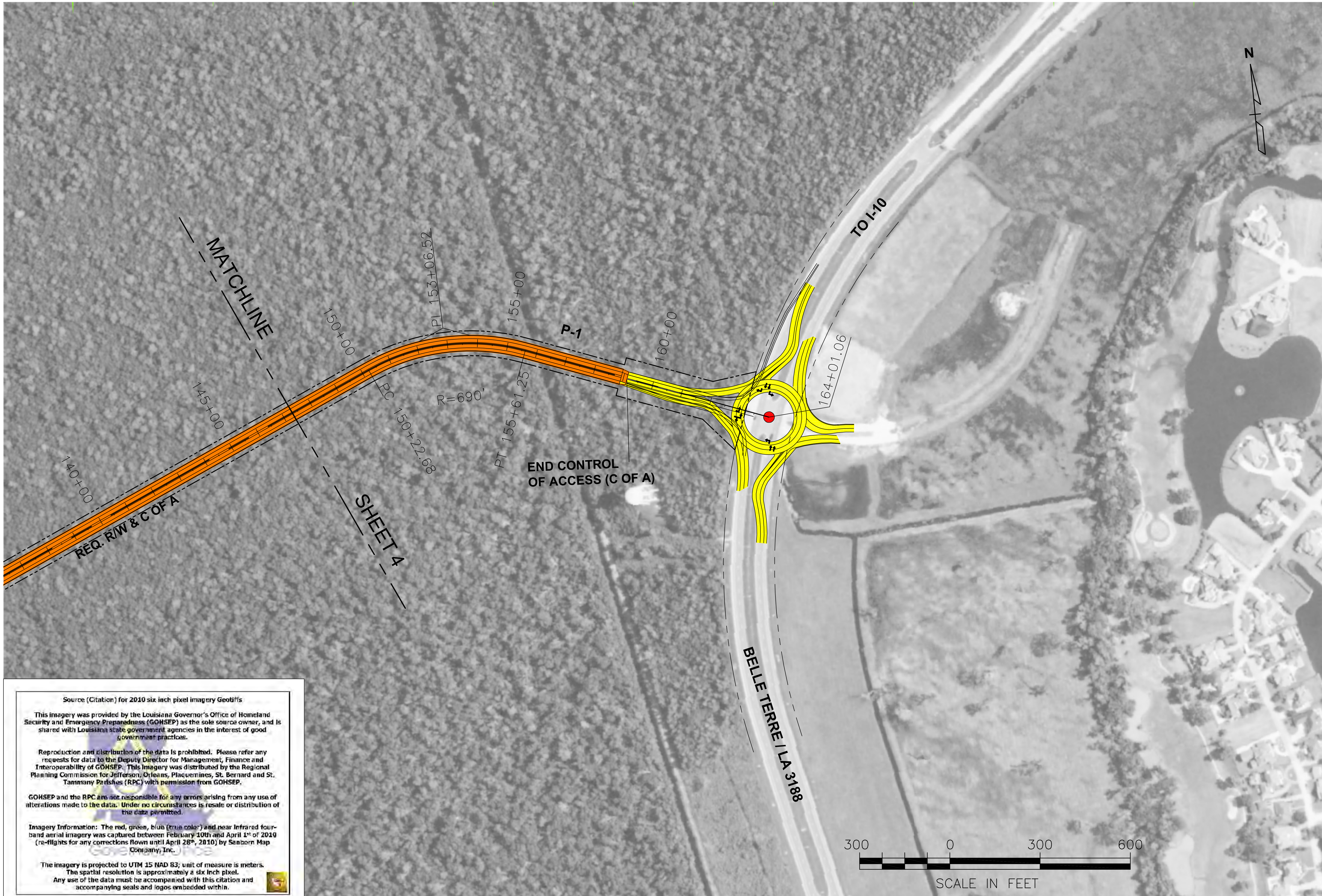

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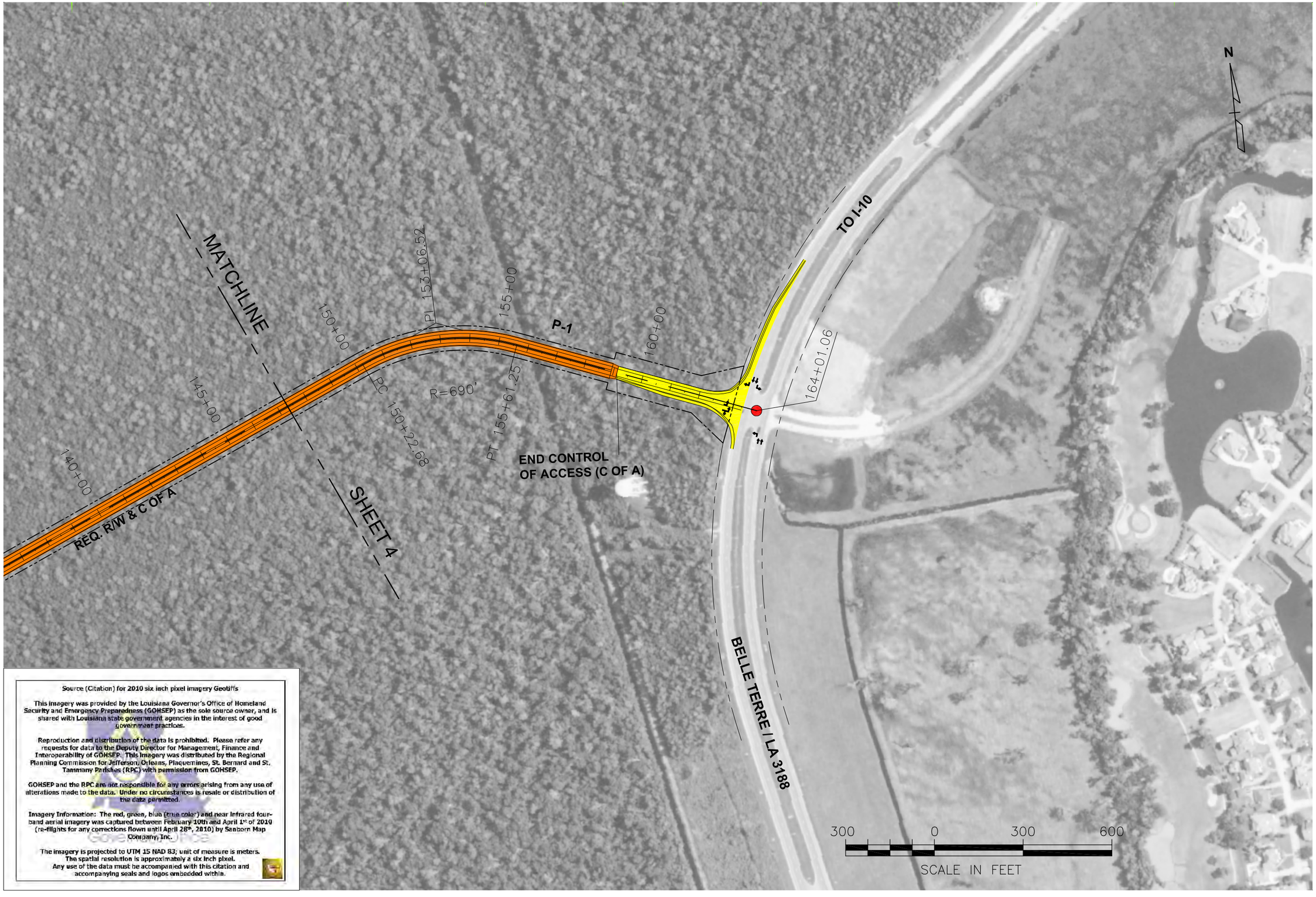

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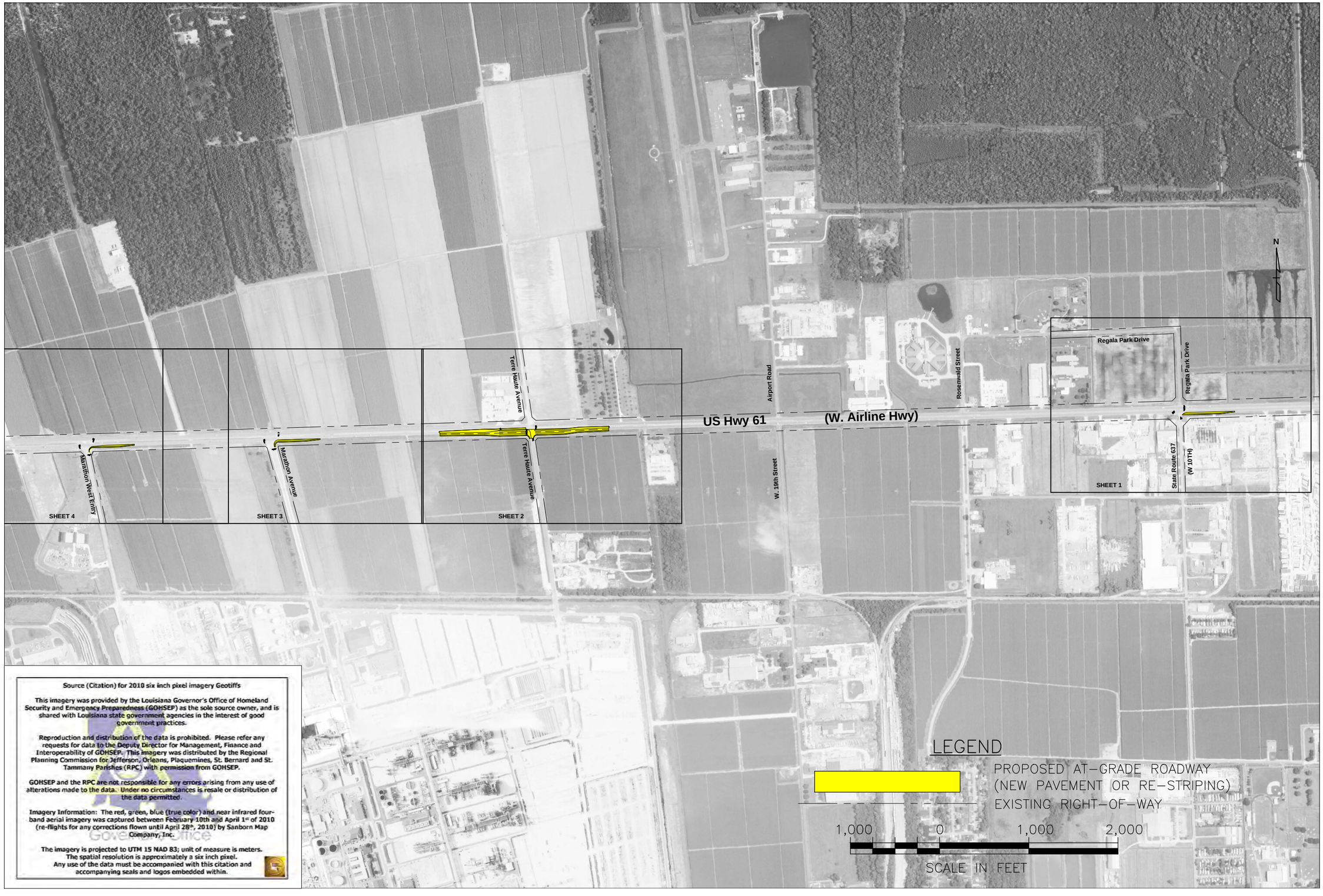

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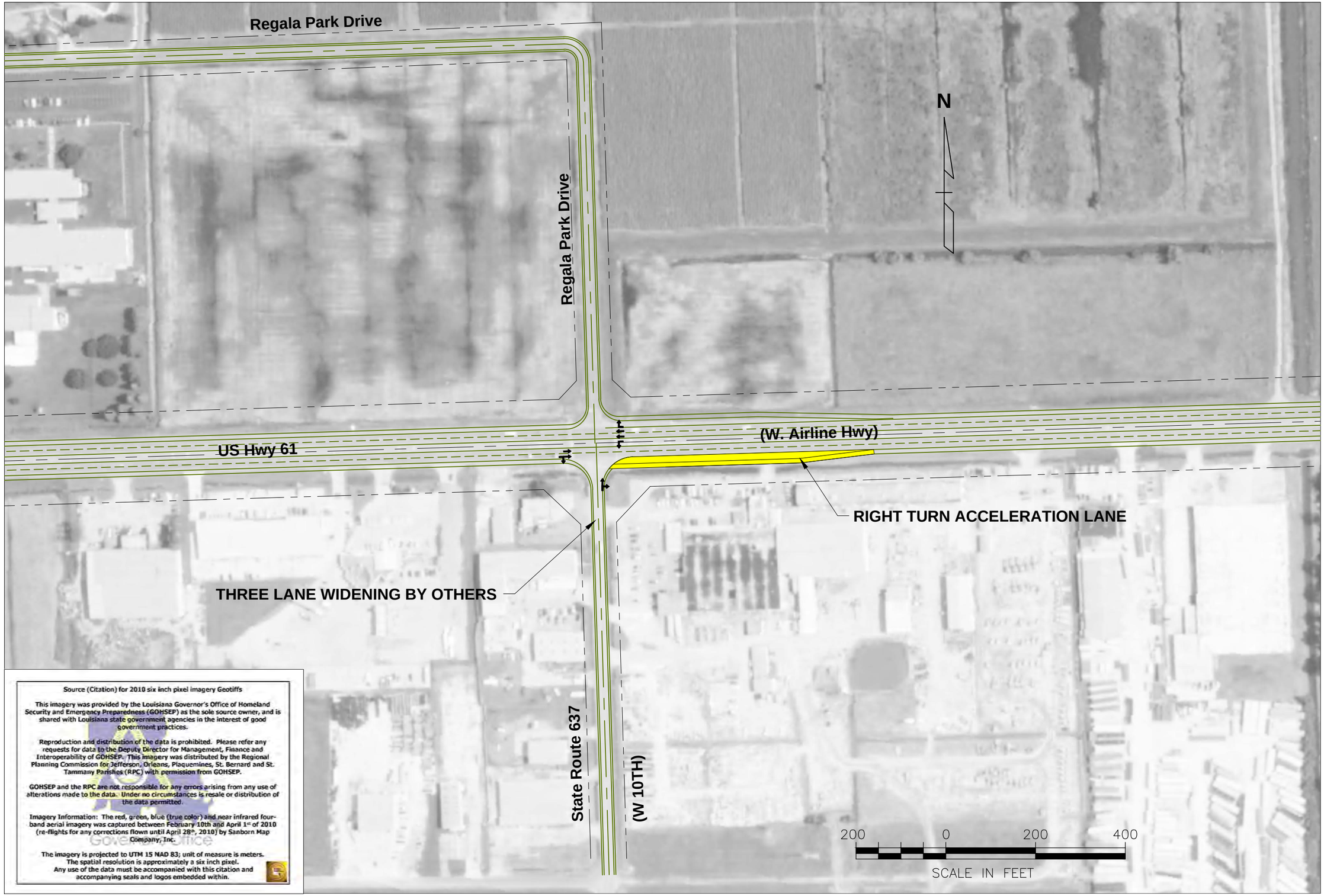

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STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH

STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ

TSM ALTERNATIVE (AIRLINE @ 10TH INTERSECTION)

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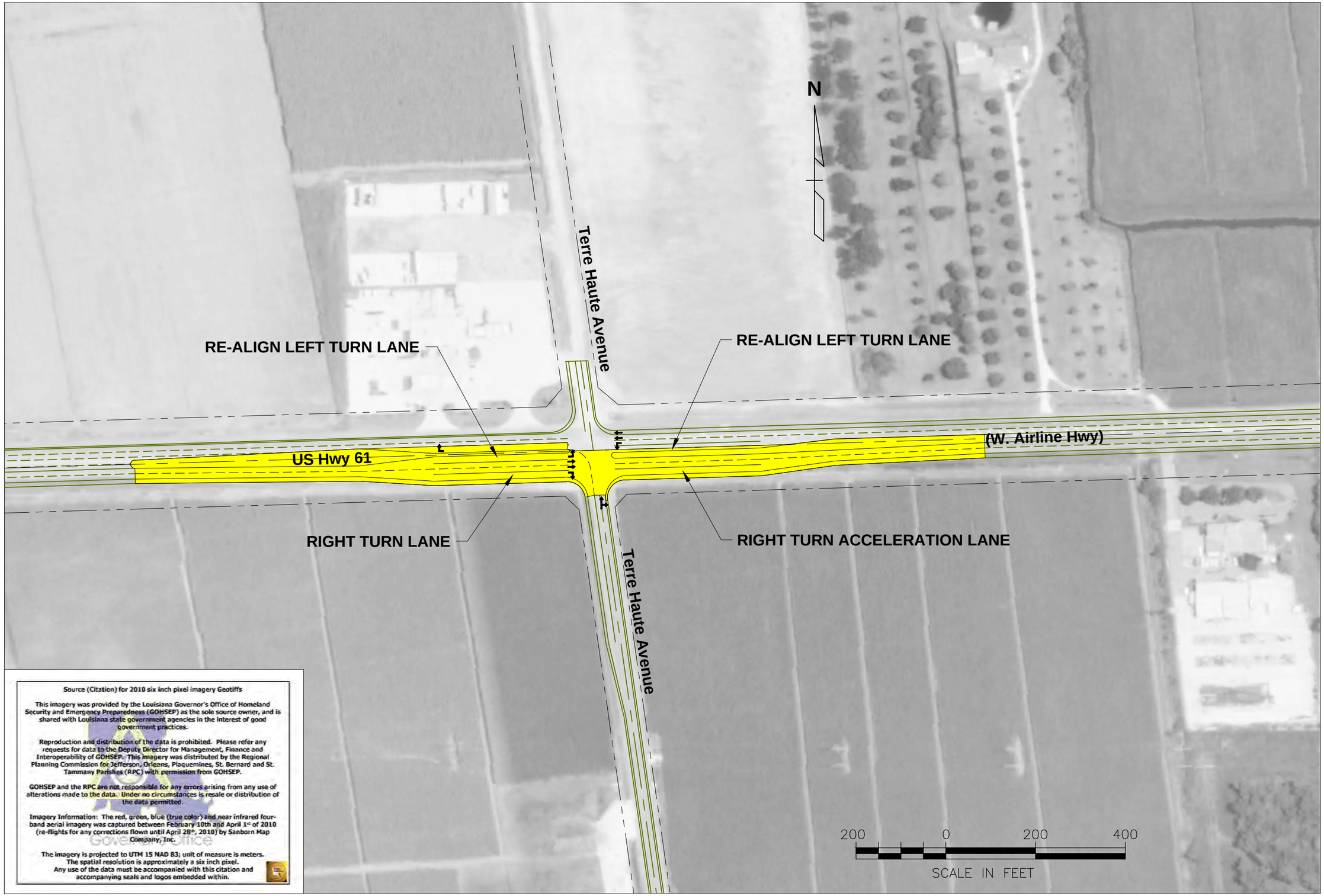

Source (Citation) for 2010 six inch pixel imagery Geotiffs

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Imagery Information: The red, green, blue (true color) and near infrared four-band aerial imagery was captured between February 10th and April 1st of 2010 (re-flights for any corrections flown until April 28th, 2010) by Sanborn Map Company, Inc.

The imagery is projected to UTM 15 NAD 83; unit of measure is meters.
The spatial resolution is approximately a six inch pixel.
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SHEET 2

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ
TSM ALTERNATIVE (AIRLINE @ TERRE HAUTE INTERSECTION)

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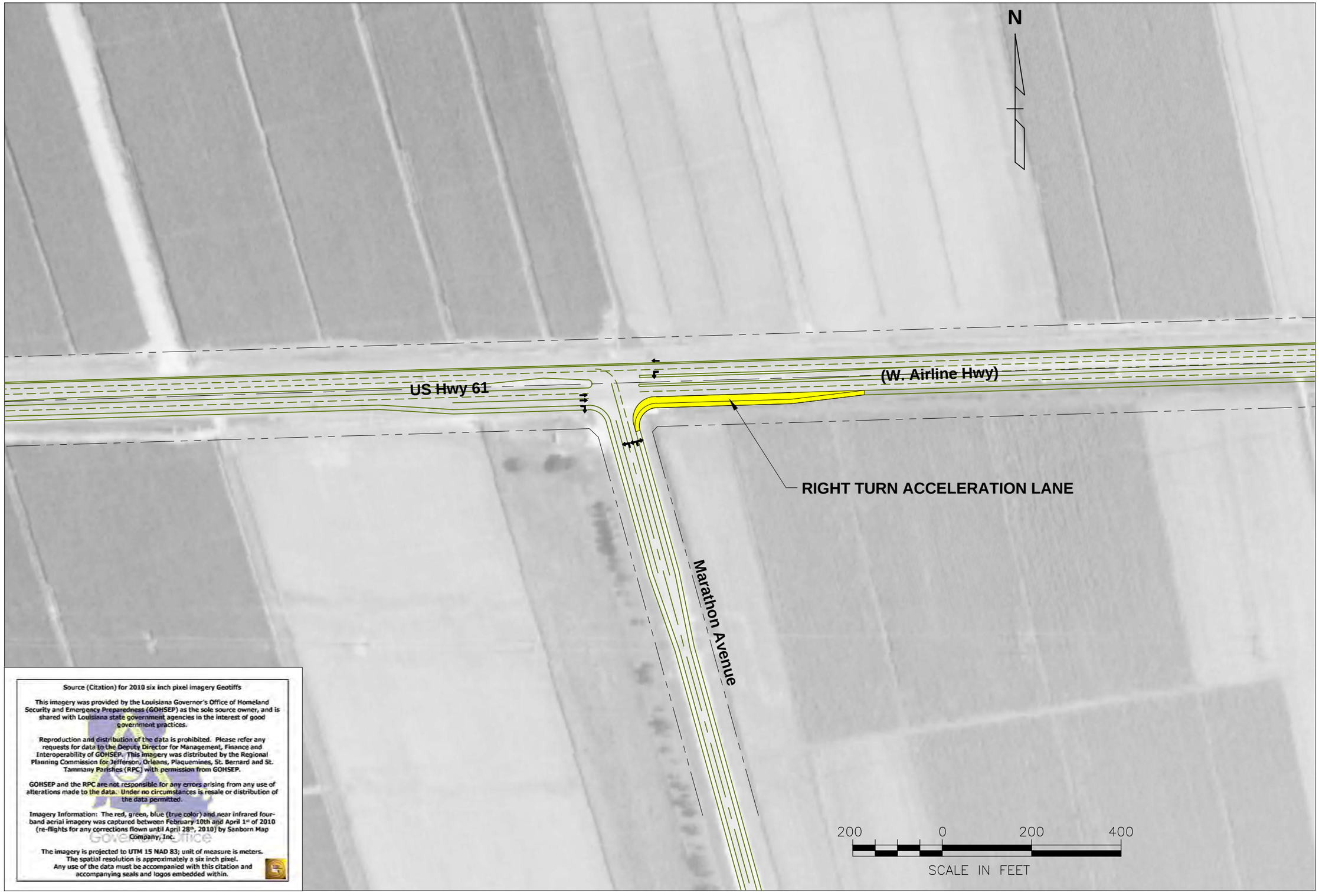

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The imagery is projected to UTM 15 NAD 83; unit of measure is meters. The spatial resolution is approximately a six inch pixel. Any use of the data must be accompanied with this citation and accompanying seals and logos embedded within.

SHEET 3

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ
TSM ALTERNATIVE (AIRLINE @ MARATHON INTERSECTION)

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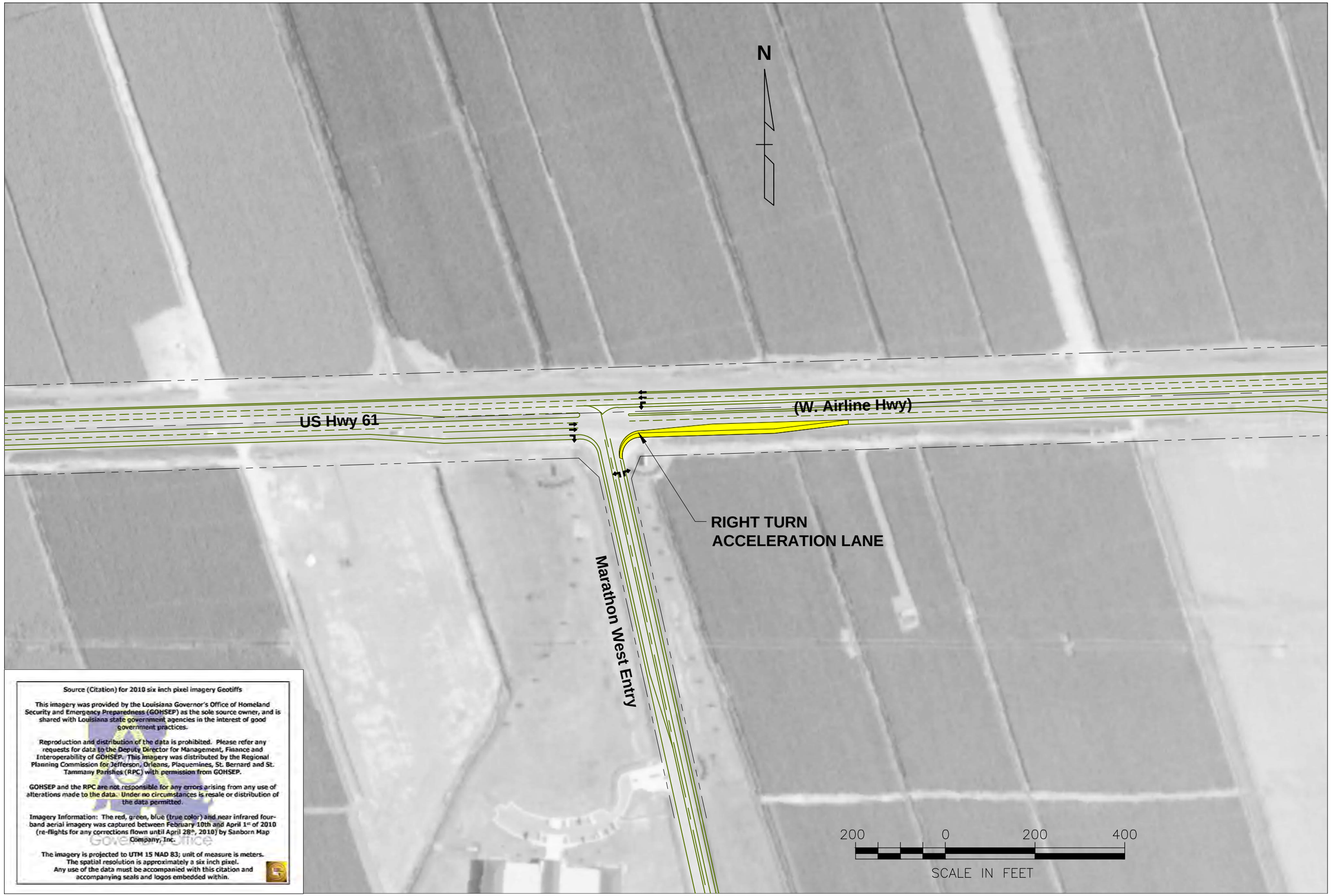

Source (Citation) for 2010 six inch pixel imagery Geotiffs

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SHEET 4

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ
TSM ALTERNATIVE (AIRLINE @ W. MARATHON INTERSECTION)

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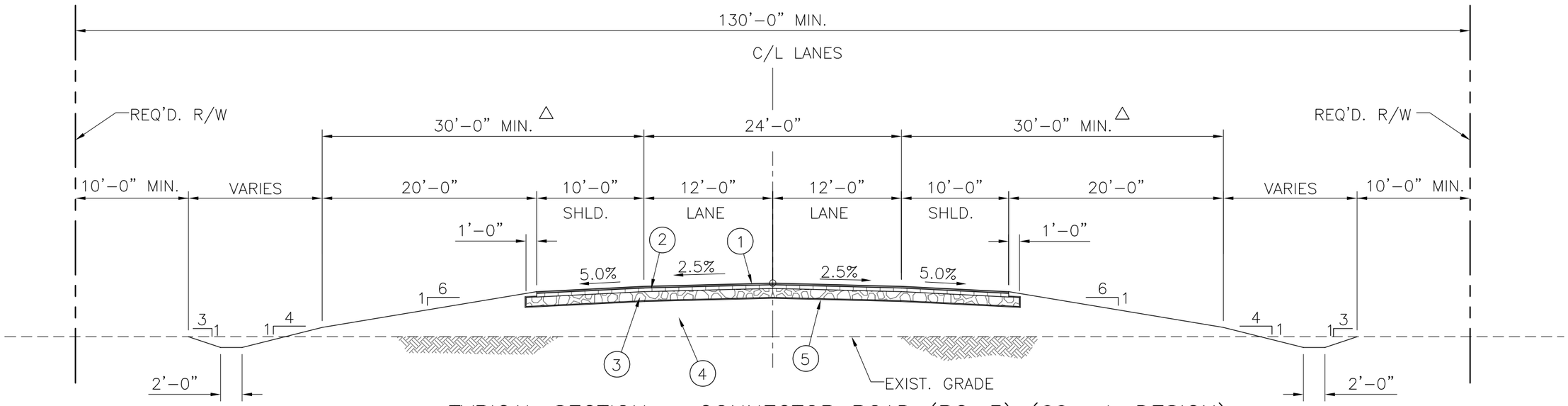

TYPICAL SECTION – CONNECTOR ROAD (RC–3) (60mph DESIGN)

LEGEND

1. 2" SUPERPAVE ASPHALTIC CONCRETE (WEARING COURSE).
2. 6" SUPERPAVE ASPHALTIC CONCRETE (BINDER COURSE).
3. 10" CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PCCP).
4. EMBANKMENT MATERIAL.
5. GEOTEXTILE FABRIC
6. 8" SUPERPAVE ASPHALTIC CONCRETE (BINDER COURSE).

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

10 0 10 20

SCALE IN FEET

SHEET TS-1

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ

TYPICAL SECTION –CONNECTOR ROAD

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LEGEND

(1) 2" SUPERPAVE ASPHALTIC CONCRETE (WEARING COURSE).

(2) 6" SUPERPAVE ASPHALTIC CONCRETE (BINDER COURSE).

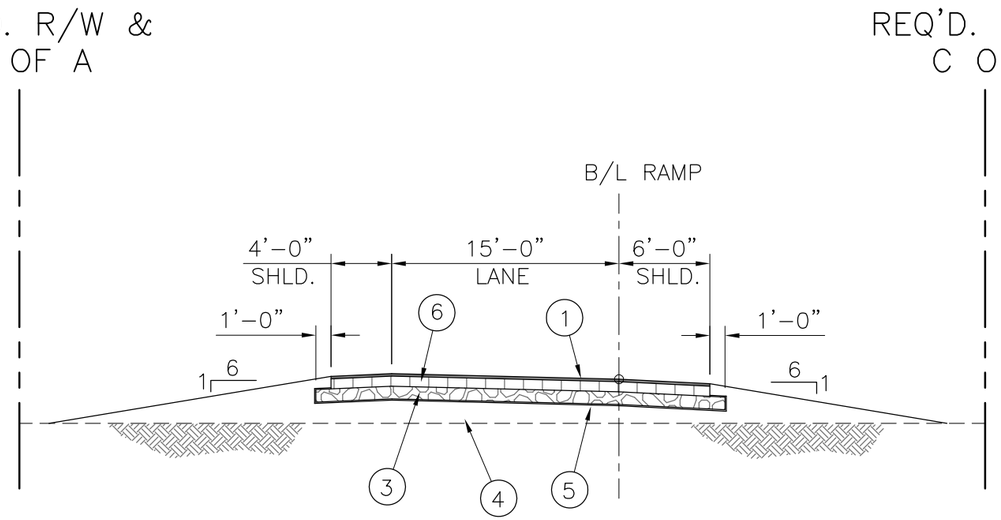
(3) 10" CLASS II BASE COURSE (CRUSHED STONE OR RECYCLED PCCP).

(4) EMBANKMENT MATERIAL.

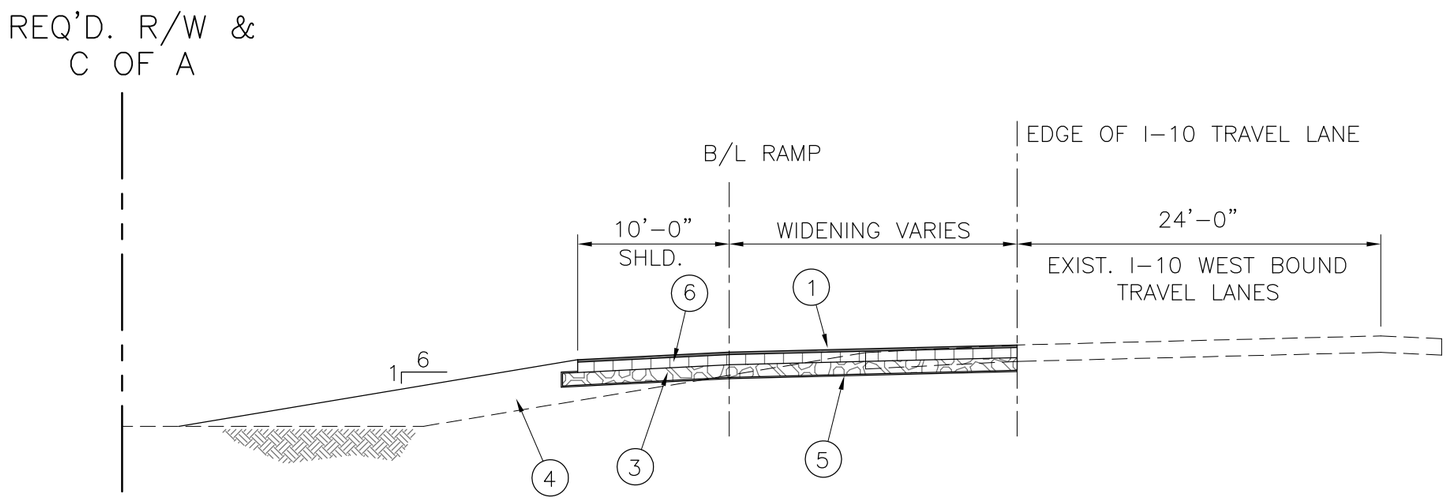
(5) GEOTEXTILE FABRIC

(6) 8" SUPERPAVE ASPHALTIC CONCRETE (BINDER COURSE).

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS



TYPICAL SECTION – RAMP AT INTERSTATE I–10



TYPICAL SECTION – I–10 WIDENING FOR RAMPS

10 0 10 20

SCALE IN FEET

SHEET TS-2

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ

TYPICAL SECTION - RAMPS AND I-10 WIDENING

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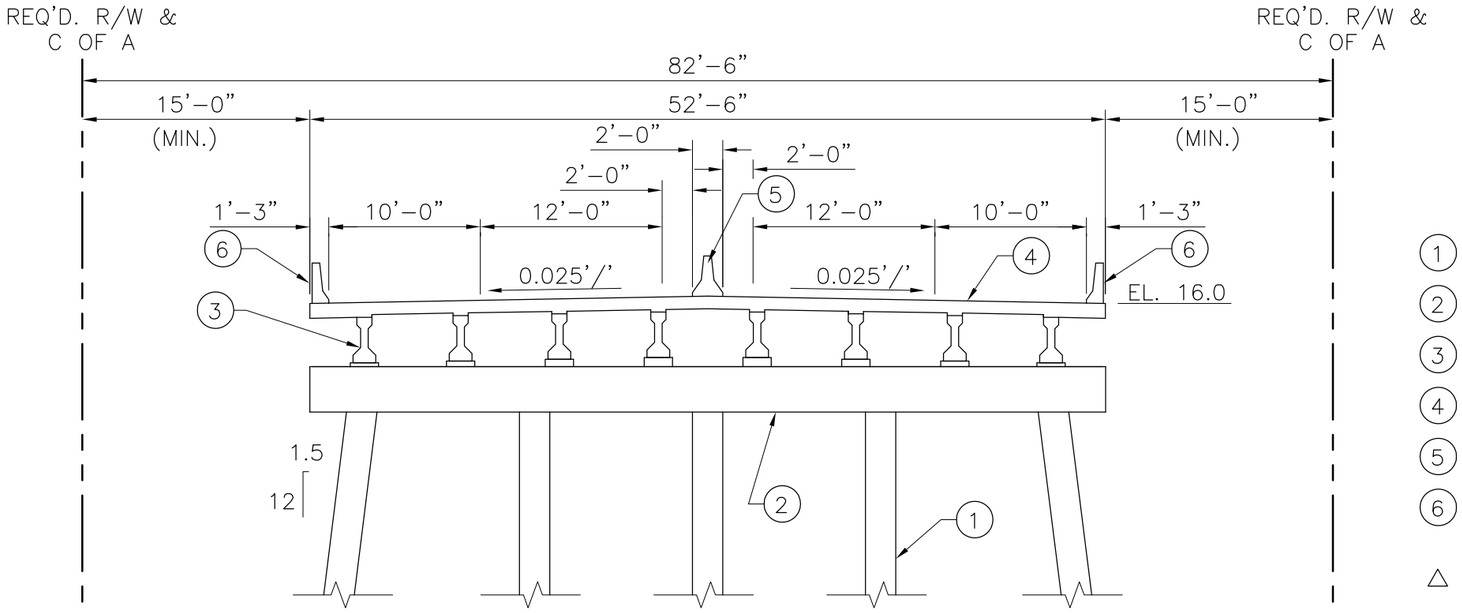

PROPOSED ELEVATED TWO LANE CONNECTOR
END–ON CONSTRUCTION
1" = 10'

LEGEND

1. 24" PPC PILES
2. CAST–IN–PLACE PILE CAP
3. TYPE II PRECAST PRESTRESSED CONCRETE GIRDERS
4. CAST–IN–PLACE CONCRETE SLAB (8" THICK)
5. 2' CONCRETE MEDIAN BARRIER RAIL
6. 1'–1" CONCRETE BARRIER RAIL

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

10 0 10 20
SCALE IN FEET

SHEET TS-3

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
S.P. No. H.004891 RPC PROJECT NO. HP-TO21 (517)

TYPICAL SECTION - CONNECTOR ROAD ELEVATED

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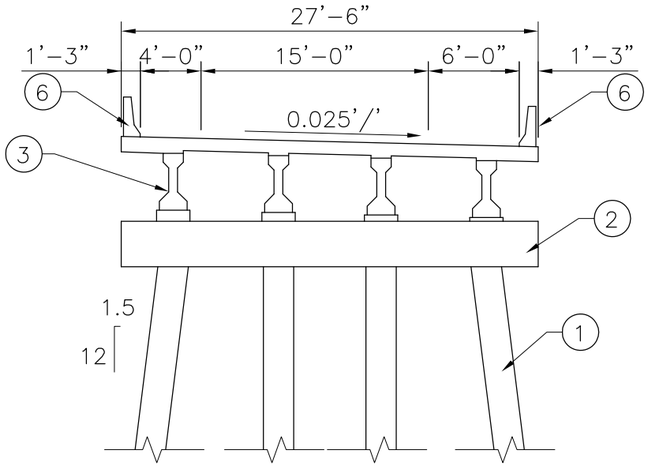
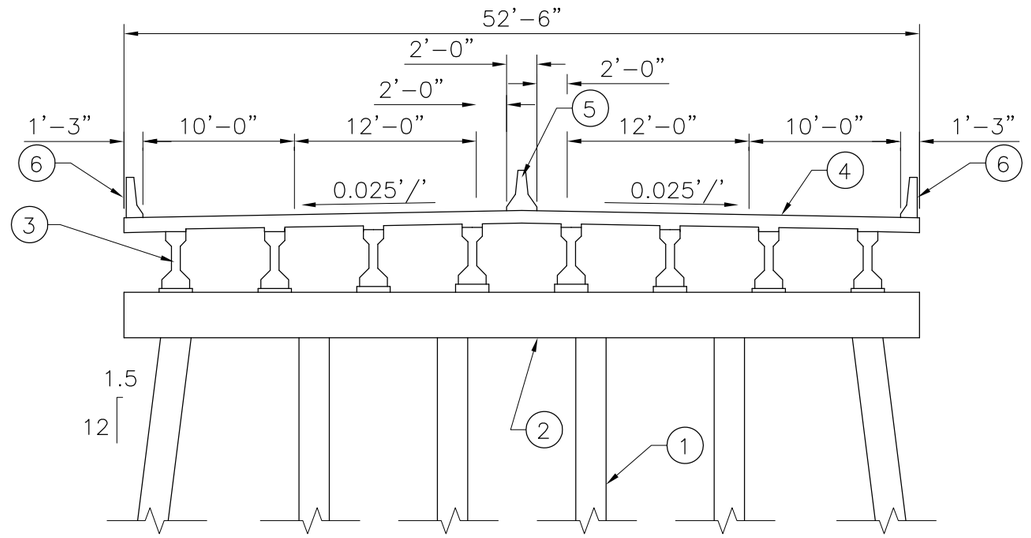


PROPOSED ELEVATED RAMP (I–10)
1" = 10'



PROPOSED ELEVATED APPROACH INTERCHANGE (I–10)
1" = 10'

LEGEND

1. 24" PPC PILES
2. CAST–IN–PLACE PILE CAP
3. TYPE III PRECAST PRESTRESSED CONCRETE GIRDERS
4. CAST–IN–PLACE CONCRETE SLAB (8" THICK)
5. 2' CONCRETE MEDIAN BARRIER RAIL
6. 1'–1" CONCRETE BARRIER RAIL

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

10 0 10 20
SCALE IN FEET

SHEET TS-4

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ

TYPICAL SECTION - I-10 CROSSOVER

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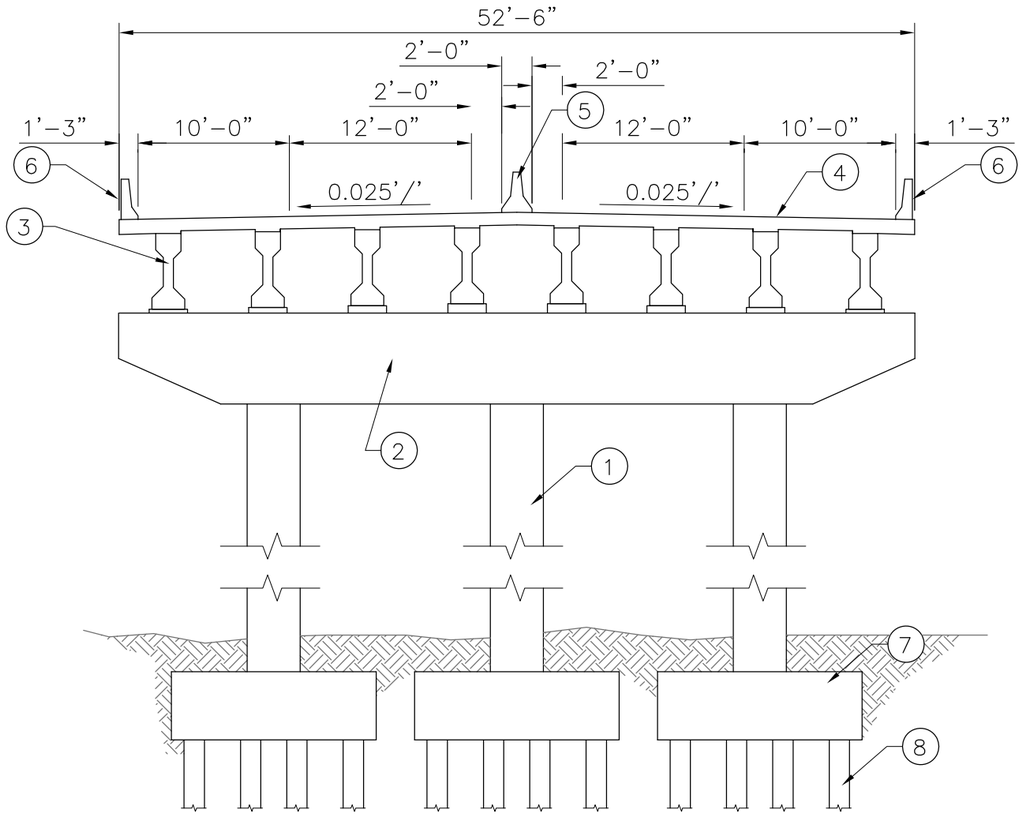

PROPOSED ELEVATED APPROACH INTERCHANGE (I–10)
1" = 10'

10 0 10 20
SCALE IN FEET

LEGEND

1. 3.5' DIA. CAST–IN–PLACE CONCRETE COLUMNS
2. CAST–IN–PLACE PILE BENT
3. TYPE IV MOD. PRECAST PRESTRESSED CONCRETE GIRDERS
4. CAST–IN–PLACE CONCRETE SLAB (8" THICK)
5. 2' CONCRETE MEDIAN BARRIER RAIL
6. 1'–1" CONCRETE BARRIER RAIL
7. 3 EACH 4.25'X 10'X 13.5' CAST–IN–PLACE CONCRETE FOOTINGS
8. 12 EACH 16" PPC PILES, EACH FOOTING

△ TO BE CONSTRUCTED FREE OF OBSTRUCTIONS

SHEET TS-5

ENHANCED ACCESS BETWEEN US 61 IN RESERVE AND I-10
STAGE 1 - ENVIRONMENTAL IMPACT STATEMENT
ST. JOHN THE BAPTIST PARISH
STATE PROJECT NO. H.004891/FEDERAL AID PROJECT NO. H004891/RPC NO. PSLC-STJ

TYPICAL SECTION - I-10 CROSSOVER

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